

APR 22 1968

# Bibliography of Hydrology of the United States 1963

---

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1863



# Bibliography of Hydrology of the United States 1963

*Compiled by J. R. RANDOLPH and R. G. DEIKE*

---

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1863



---

UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1966

---

UNITED STATES DEPARTMENT OF THE INTERIOR

STEWART L. UDALL, *Secretary*

GEOLOGICAL SURVEY

William T. Pecora, *Director*

## CONTENTS

---

	Page
Introduction . . . . .	V
Previous bibliographies . . . . .	VI
Serial publications . . . . .	VII
Bibliography . . . . .	I
Index . . . . .	105

# BIBLIOGRAPHY OF HYDROLOGY OF THE UNITED STATES

1963

---

Compiled by J. R. RANDOLPH and R. G. DEIKE

---

## INTRODUCTION

The "Bibliography of Hydrology of the United States, 1963" is the first of a series of annual bibliographies on hydrology to be published by the United States Geological Survey. This volume lists references to books, journal articles, and other publications in the field of hydrology published in the United States during 1963. Some references to material published in Canada have been included, and, in addition, some references have been taken from international journals in which American authors frequently publish. It is expected that subsequent bibliographies will include material published in Canada, Mexico, and the countries of Central America and thus be companion volumes to the U.S. Geological Survey's "Bibliography of North American Geology."

Previous bibliographies on hydrology of the United States have been prepared under various auspices. A list of citations to the most inclusive ones follows this introduction.

Hydrology, for purposes of this bibliography, is defined as the science that relates to the waters of the earth, their occurrence, distribution, movement, and chemical and physical properties. The studies of water in the oceans and in the atmosphere are technically part of the science of hydrology, but in practice they have been included in the sciences of oceanography and meteorology. However, some references from these fields have been included in this bibliography where the material is relevant to the problems of water in general. Similarly, articles in other allied sciences have been cited if they seem to contain material of interest to hydrologists.

The bibliography includes entries for compilations of basic data except for those reports that are part of a U.S. Government series published monthly or annually, such as the U.S. Weather Bureau's "Climatological Data" and the U.S. Geological Survey's "Quality of Surface Waters of the United States." Periodicals directed toward nontechnical readers have not been searched regularly, but selected articles from them have been included.

Citations are listed alphabetically by author, with full title and publication data. The index combines subject and geographic headings.

The U.S. Geological Survey has designed and developed, and is now applying, computer techniques to the processing, storage, retrieval, and publication of references to technical literature in geology, geochemistry, geophysics of the solid earth, and hydrology. In this system, bibliographic and indexing information is placed on magnetic tape and entered into a permanent storage bank. Computer processing of the material in the data bank is coupled with automatic photocomposing equipment to produce printer's copy. This system can be adapted readily to the more sophisticated information storage and retrieval systems being developed by computer manufacturers.

Other U.S. Geological Survey publications using this computer system are the annual "Bibliography of North American Geology," the monthly "Geophysical Abstracts," and the monthly "Abstracts of North American Geology."

The assistance of Agatha P. Humphrey, Edith B. Chase, James W. Clarke, and Virginia E. Rees in the preparation of this volume is gratefully acknowledged.

#### PREVIOUS BIBLIOGRAPHIES ON HYDROLOGY OF THE UNITED STATES

- American Geophysical Union, Section on Hydrology, 1937, Bibliography of hydrology, United States of America for the years 1935 and 1936: Washington, D. C., Am. Geophys. Union, 78 p.
- \_\_\_\_\_, 1938, Bibliography of hydrology, United States of America for the year 1937: Washington, D. C., Am. Geophys. Union, 68 p.
- \_\_\_\_\_, 1939, Bibliography of hydrology, United States of America for the year 1938: Washington, D. C., Am. Geophys. Union, 72 p.
- \_\_\_\_\_, 1940, Bibliography of hydrology, United States of America for the year 1939: Washington, D. C., Am. Geophys. Union, 86 p.
- \_\_\_\_\_, 1941, Bibliography of hydrology, United States of America for the year 1940: Washington, D. C., Am. Geophys. Union, 93 p.
- American Geophysical Union, 1952, Annotated bibliography on hydrology, 1941-1950 (United States and Canada): Federal Inter-Agency River Basin Comm., Subcommittee on Hydrology Notes on Hydrologic Activities Bull. 5, 408 p.
- \_\_\_\_\_, 1955, Annotated bibliography on hydrology, 1951-54, and sedimentation, 1950-54 (United States and Canada): U.S. Inter-Agency Comm. Water Resources Joint Hydrology-Sedimentation Bull. 7, 207 p.
- Bradbury, Carroll E., and Associates, 1964, Annotated bibliography on hydrology and sedimentation, 1959-1962 (United States and Canada): U.S. Inter-Agency Comm. Water Resources Joint Hydrology-Sedimentation Bull. 8, 323 p.
- Riggs, H. C., compiler, 1962, Annotated bibliography on hydrology and sedimentation, United States and Canada, 1955-58: U.S. Geol. Survey Water-Supply Paper 1546, 236 p.
- Vorhis, R. C., 1957, Bibliography of publications relating to ground water prepared by the Geological Survey and cooperating agencies, 1946-55: U.S. Geol. Survey Water-Supply Paper 1492, 203 p.
- Waring, G. A., and Meinzer, O. E., 1947, Bibliography and index of publications relating to ground water prepared by the Geological Survey and cooperating agencies: U.S. Geol. Survey Water-Supply Paper 992, 412 p.

## SERIAL PUBLICATIONS

The following list gives the abbreviated titles of periodicals and serial publications most commonly cited in this bibliography, their complete titles, and the place of publication. It would be impractical to include in the list all the journals that are searched regularly, many of which only rarely carry papers of interest to hydrologists. Complete information on any publications not included in the list is given with the citation in the bibliography proper. Guidebooks, proceedings, and related types of literature prepared for special conferences, congresses, and symposiums are not listed here as serials but are cited in the bibliography under the name of the editor or of the issuing society.

- Agr. Eng.—Agricultural Engineering. American Society of Agricultural Engineers. St. Joseph, Michigan.
- Agronomy Jour.—Agronomy Journal. American Society of Agronomy. Madison, Wisconsin.
- Alabama Geol. Survey Bull.—
- Alabama Geol. Survey Circ.—
- Alabama Geol. Survey County Rept.—
- Alabama Geol. Survey Inf. Ser.—  
Geological Survey of Alabama *Bulletin and Circular and County Report and Information Series*. University, Alabama.
- Alaska Dept. Health and Welfare Hydrol. Data—Alaska Department of Health and Welfare Hydrological Data. Juneau, Alaska.
- Alberta Research Council Bull.—
- Alberta Research Council Prelim. Rept.—  
Alberta Research Council Bulletin and Preliminary Report. Edmonton, Alberta, Canada.
- Am. Assoc. Adv. Sci. Pub.—American Association for the Advancement of Science Publication. Washington, D. C.
- Am. Assoc. Petroleum Geologists Bull.—American Association of Petroleum Geologists Bulletin. Tulsa, Oklahoma.
- Am. City—American City. Buttenheim Publishing Corporation, New York, N. Y.
- Am. Forests—American Forests. American Forestry Association. Washington, D. C.
- Am. Geophys. Union Trans.—American Geophysical Union Transaction. Washington, D. C.
- Am. Inst. Chem. Engineers Jour.—American Institute of Chemical Engineers Journal. New York, N. Y.
- Am. Jour. Physics—American Journal of Physics. American Institute of Physics, Inc. New York, N. Y.
- Am. Jour. Sci.—American Journal of Science, New Haven, Connecticut.
- Am. Meteorol. Soc. Bull.—American Meteorological Society Bulletin. Boston, Massachusetts.
- Am. Scientist—American Scientist. Society of the Sigma Xi. New Haven, Connecticut.
- Am. Soc. Agr. Engineers Trans. (Gen. Ed.)—American Society of Agricultural Engineers Transactions (General Edition). St. Joseph, Michigan.
- Am. Soc. Civil Engineers Proc., Hydraulics Div. Jour.—
- Am. Soc. Civil Engineers Proc., Irrig. and Drainage Div. Jour.—

- Am. Soc. Civil Engineers Proc., Soil Mechanics and Foundation Div. Jour.—Proceedings of the American Society of Civil Engineers, Journal of the Hydraulics Division and Journal of the Irrigation and Drainage Division and Journal of the Soil Mechanics and Foundation Division. New York, N. Y.
- Am. Soc. Civil Engineers, Southern Arizona Branch Rept.—American Society of Civil Engineers, Southern Arizona Branch Report. Tucson, Arizona.
- Am. Soc. Mech. Engineers Trans., Ser. D, Jour. Basic Eng.—American Society of Mechanical Engineers Transactions, Series D, Journal of Basic Engineering. New York, N. Y.
- Am. Soc. Testing and Materials Proc.—
- Am. Soc. Testing and Materials Spec. Tech. Pub.—  
American Society for Testing and Materials Proceedings and Special Technical Publication. Philadelphia, Pennsylvania.
- Am. Water Works Assoc. Jour.—American Water Works Association Journal. Birmingham, Alabama.
- Anal. Chemistry—Analytical Chemistry. American Chemical Society. Washington, D. C.
- Applied Sci. Research, Sec. A.—Applied Scientific Research, Section A: Mechanics, Heat, Chemical Engineering, Mathematical Methods. Amsterdam, Netherlands.
- Arid Zone—Arid Zone, United Nations Educational, Scientific, and Cultural Organization. Paris, France.
- Arizona Geol. Soc. Digest—Arizona Geological Society Digest. Tucson, Arizona.
- Arizona State Land Dept. Water Resources Rept.—Arizona State Land Department Water Resources Report. Phoenix, Arizona.
- Arkansas Univ. Eng. Expt. Sta. Research Rept.—Arkansas University Engineering Experiment Station Research Report. Fayetteville, Arkansas.
- Assoc. Am. Geographers Annals—Annals of the Association of American Geographers. Washington, D. C.
- Biotechnology and Bioengineering—Biotechnology and Bioengineering. Interscience Publishers. New York, N. Y.
- California Dept. Water Resources Bull.—California Department of Water Resources Bulletin. Sacramento, California.
- California Div. Mines and Geology Spec. Rept.—California Department of Natural Resources, Division of Mines and Geology Special Report. San Francisco, California.
- California State Water Quality Control Board Pub.—California State Water Quality Control Board Publication. Sacramento, California.
- California Univ. Water Resources Center Archives, Archives Ser. Rept.—
- California Univ. Water Resources Center Contr.—
- California Univ. Water Resources Center Rept.—  
University of California, Water Resources Center Archives, Archives Series Report and Water Resources Center Contribution and Report. Berkeley, California.
- Canada Dept. Agr. Pub.—Canada Department of Agriculture Publication. Ottawa, Ontario, Canada.
- Canada Geol. Survey Paper—Geological Survey of Canada Paper. Ottawa, Ontario, Canada.
- Canadian Geophys. Bull.—Canadian Geophysical Bulletin. The Associate Committee on Geodesy and Geophysics of the National Research Council of Canada. Ottawa, Ontario, Canada.
- Canadian Geotech. Jour.—Canadian Geotechnical Journal. Revue Canadienne de Géotechnique. Associated Committee on Soil and Snow Mechanics, National Research Council, and the Geotechnical Engineering Division Engineering Institute of Canada. Toronto, Ontario, Canada.

- Canadian Jour. Physics—Canadian Journal of Physics. National Research Council of Canada. Ottawa, Ontario, Canada.
- Canadian Jour. Plant Sci.—Canadian Journal of Plant Science. Agricultural Institute of Canada. Ottawa, Ontario, Canada.
- Canadian Jour. Soil Sci.—Canadian Journal of Soil Science. Agricultural Institute of Canada. Ottawa, Ontario, Canada.
- Cave Notes—Cave Notes. Cave Research Associates. Castro Valley, California.
- Colorado School Mines Quart.—Quarterly of the Colorado School of Mines. Golden, Colorado.
- Colorado State Univ. Hydrology Paper—Colorado State University Hydrology Paper. Fort Collins, Colorado.
- Colorado Water Conserv. Board Basic—Data Rept.—
- Colorado Water Conserv. Board Ground—Water Circ.—  
Colorado Water Conservation Board Basic—Data Report and Ground—Water Circular. Denver, Colorado.
- Conservationist—The Conservationist. State of New York Conservation Department. Albany, New York.
- Econ. Geology—Economic Geology. Society of Economic Geologists. Urbana, Illinois.
- Eng. Inst. Canada Trans.—Engineering Institute of Canada Transaction. Montreal, Quebec, Canada.
- Florida Geol. Survey Inf. Circ.—
- Florida Geol. Survey Map Ser.—
- Florida Geol. Survey Rept. Inv.—  
Florida Geological Survey Information Circular and Map Series and Report of Investigations. Tallahassee, Florida.
- Geochim. et Cosmochim. Acta—Geochimica et Cosmochimica Acta. Pergamon Press. London, England.
- Geofisica Pura e Applicata—Geofisica Pura a Applicata [Pure and Applied Geophysics]. Instituto Geofisica Italiano. Milan, Italy.
- Geog. Rev.—Geographical Review. American Geographical Society of New York, New York, N. Y.
- Geol. Soc. America Eng. Geology Case Histories—Geological Society of America Engineering Geology Case Histories. New York, N. Y.
- Geophysics—Geophysics. Society of Exploration Geophysicists. Tulsa, Oklahoma.
- Georgia Geol. Survey Bull.—
- Georgia Geol. Survey Inf. Circ.—
- Georgia Geol. Survey Spec. Pub.—  
Georgia Geological Survey Bulletin and Information Circular and Special Publication. Atlanta, Georgia.
- Georgia Mineral Newsletter—Georgia Mineral Newsletter. Georgia Geological Survey. Atlanta, Georgia.
- Ground Water—Ground Water. Journal of the Technical Division, National Water Well Association. Urbana, Illinois.
- Hawaii Div. Water and Land Devel. Circ.—Hawaii State Department of Land and Natural Resources, Division of Water and Land Development Circular. Honolulu, Hawaii.
- Hydrobiologia—Hydrobiologia. Acta Hydrobiologica, Hydrographia et Prolistologica. The Hague, Netherlands.
- ICSU Review of World Sci.—International Council of Scientific Unions Review of World Science. Elsevier Publishing Co. Amsterdam, Netherlands.
- Illinois State Acad. Sci. Trans.—Transactions of the Illinois State Academy of Science. Springfield, Illinois.

- Illinois State Geol. Survey Circ.—Illinois State Geological Survey Circular. Urbana, Illinois.
- Illinois State Water Survey Bull.—
- Illinois State Water Survey Circ.—
- Illinois State Water Survey Rept. Inv.—
- Illinois State Water Survey Bulletin and Circular *and* Report of Investigations. Urbana, Illinois.
- Illinois Univ. Eng. Expt. Sta. Circ.—University of Illinois Engineering Experiment Station Circular. Urbana, Illinois.
- Indiana Div. Water Resources Bull.—Indiana State Department of Conservation, Division of Water Resources Bulletin. Indianapolis, Indiana.
- Indiana Geol. Survey Spec. Rept.—Indiana Geological Survey Special Report. Bloomington, Indiana.
- Inst. Water Engineers Jour.—Journal of the Institution of Water Engineers. London, England.
- Internat. Assoc. Sci. Hydrology Bull.—
- Internat. Assoc. Sci. Hydrology Pub.—
- International Association of Scientific Hydrology Bulletin *and* Publication. Gentbrugge, Belgium.
- Internat. Atomic Energy Agency Proc. Ser.—
- Internat. Atomic Energy Agency Safety Ser.—
- International Atomic Energy Agency Proceedings Series *and* Safety Series, National Agency for International Publications, Inc. New York, N. Y.
- Internat. Jour. Air and Water Pollution—International Journal of Air and Water Pollution. Pergamon Press. New York, N. Y., London, England.
- Interstate Comm. Potomac River Basin Tech. Bull.—Interstate Commission on the Potomac River Basin Technical Bulletin. Washington, D. C.
- Iowa Acad. Sci. Proc.—Iowa Academy of Science Proceedings. Des Moines, Iowa.
- Iowa Geol. Survey Water Supply Bull. Iowa Geological Survey Water-Supply Bulletin. Iowa City, Iowa.
- Iowa Highway Research Board Bull. - Iowa Highway Research Board Bulletin. Ames, Iowa.
- Irrig. Eng. and Maintenance—Irrigation Engineering and Maintenance. New Orleans, Louisiana.
- Johns Hopkins Univ., Chesapeake Bay Inst., Graph. Summ. Rept.—Johns Hopkins University, Chesapeake Bay Institute Graphical Summary Report. Baltimore, Md.
- Jour. Appl. Meteorology—Journal of Applied Meteorology. American Meteorological Society. Boston, Massachusetts.
- Jour. Fluid Mechanics—Journal of Fluid Mechanics. Cambridge University Press. London, England.
- Jour. Forestry—Journal of Forestry. Society of American Foresters. Washington, D. C.
- Jour. Geol. Education—Journal of Geological Education. National Association of Geology Teachers. Princeton, New Jersey.
- Jour. Geology—Journal of Geology. University of Chicago Press. Chicago, Illinois.
- Jour. Geophysics. Research—Journal of Geophysical Research. American Geophysical Union. Washington, D. C.
- Jour. Hydrology [Amsterdam]—Journal of Hydrology. North-Holland Publishing Company. Amsterdam, Netherlands.
- Jour. Petroleum Technology—Journal of Petroleum Technology. Society of Petroleum Engineers of the American Institute of Mining, Metallurgical, and Petroleum Engineers. Dallas, Texas.

- Jour. Phys. Chemistry—Journal of Physical Chemistry. American Chemical Society. Washington, D. C.
- Jour. Range Management—Journal of Range Management. American Society of Range Management. Portland, Oregon.
- Jour. Sed. Petrology—Journal of Sedimentary Petrology. Society of Economic Paleontologists and Mineralogists, a Division of The American Association of Petroleum Geologists. Tulsa, Oklahoma.
- Jour. Soil and Water Conserv.—Journal of Soil and Water Conservation. Soil Conservation Society of America. Ankeny, Iowa.
- Kansas Acad. Sci. Trans.—Transactions of the Kansas Academy of Science. Lawrence, Kansas.
- Kansas Agr. Expt. Sta. Tech. Bull.—Kansas Agricultural Experiment Station Technical Bulletin. Manhattan, Kansas.
- Kansas Geol. Survey Bull.—State Geological Survey of Kansas Bulletin. Lawrence, Kansas.
- Kentucky Geol. Survey Rept. Inv.—Kentucky Geological Survey Report of Investigations. Lexington, Kentucky.
- Land and Water Contracting—Land and Water Contracting. Land Publications, Inc. Barrington, Illinois.
- Limnology and Oceanography—Limnology and Oceanography. American Society of Limnology and Oceanography. Ann Arbor, Michigan.
- Louisiana Dept. Conserv., Geol. Survey; and Louisiana Dept. Public Works, Water Resources Pamph.—Louisiana Department of Conservation, Geological Survey; and Louisiana Department of Public Works, Water Resources Bulletin *and* Pamphlet. Baton Rouge, Louisiana.
- Louisiana Dept. Public Works Tech. Rept.—Louisiana Department of Public Works Technical Report. Baton Rouge, Louisiana.
- Lund Studies in Geography, [Royal Univ. of Lund, Sweden] Ser. A. Phys. Geography—Lund Studies in Geography, [Royal University of Lund, Sweden] Series A. Physical Geography.
- Massachusetts Water Resources Comm., Massachusetts Basic-Data Rept., Ground-Water Ser.—Massachusetts Water Resources Commission, Massachusetts Basic-Data Report, Ground-Water Series. Boston, Massachusetts.
- Materials Research and Standards—Materials Research and Standards, American Society for Testing and Materials. Philadelphia, Pennsylvania.
- Michigan Geol. Survey Water Inv.—Michigan Geological Survey Water Investigation. Lansing, Michigan.
- Michigan Geol. Survey Div. Water-Supply Rept.—Michigan Geological Survey Division Water-Supply Report. Lansing, Michigan.
- Michigan State Univ., Dept. Resource Devel., Agr. Expt. Sta. Water Bull.—Michigan State University, Department of Resource Development, Agricultural Experiment Station Water Bulletin. East Lansing, Michigan.
- Michigan Univ. Great Lakes Research Div. Pub.—University of Michigan, Institute for Science and Technology, Great Lakes Research Division Publication. Ann Arbor, Michigan.
- Mil. Engineer—Military Engineer, Society of American Military Engineers. Washington, D. C.
- Mineral Industries, Pennsylvania State Univ., Div. Mineral Industries Ext.—Mineral Industries, Pennsylvania State University, Division of Mineral Industries Extension. University Park, Pennsylvania.

- Minnesota Div. Waters Bull.—Minnesota State Department of Conservation, Division of Waters Bulletin. St. Paul, Minnesota.
- Mississippi Board Water Commissioners Bull.—Mississippi Board of Water Commissioners Bulletin. Jackson, Mississippi.
- Mississippi Geol. Econ., and Topog. Survey Bull.—Mississippi Geological, Economic, and Topographic Survey Bulletin. Jackson, Mississippi.
- Mississippi Indus. and Tech. Research Comm., Water Research Bull.—Mississippi Industrial and Technological Research Commission Water Research Bulletin.
- Missouri Basin Inter-Agency Comm. Mtg. Minutes—Missouri Basin Inter-Agency Committee Meeting Minutes.
- Natl. Acad. Sci.-Natl. Research Council Pub.—National Academy of Sciences-National Research Council Publication. Washington, D. C.
- Nat. Resources Jour.—Natural Resources Journal, University of New Mexico School of Law, Albuquerque, New Mexico.
- Nebraska Univ., Conserv. and Survey Div., Nebraska Water Survey Test Hole Rept.—University of Nebraska, Conservation and Survey Division, Nebraska Water Survey Test Hole Report. Lincoln, Nebraska.
- Nebraska Univ., Conserv. and Survey Div. Water Survey Paper—University of Nebraska, Conservation and Survey Division Water Survey Paper. Lincoln, Nebraska.
- Nevada Dept. Conserv. and Nat. Resources, Ground-Water Resources-Reconn. Ser. Rept.—Nevada Department of Conservation and Natural Resources, Ground-Water Resources-Reconnaissance Series Report. Carson City, Nevada.
- Nevada Dept. Conserv. and Nat. Resources, Water and Related Land Resources Rept.—Nevada Department of Conservation and Natural Resources, Water and Related Land Resources Report. Carson City, Nevada.
- Nevada Dept. Conserv. and Nat. Resources Water Resources Bull.—Nevada Department of Conservation and Natural Resources, Water Resources Bulletin. Carson City, Nevada.
- Nevada Univ. Desert Research Inst. Tech. Rept.—University of Nevada, Desert Research Institute Technical Report. Reno, Nevada.
- New England Water Works Assoc. Jour.—Journal of the New England Water Works Association. Boston, Massachusetts.
- New Jersey Bur. Geology and Topography, Geol. Rept. Ser.—New Jersey Bureau of Geology and Topography Geological Report Series. Trenton, New Jersey.
- New Jersey Div. Water Policy and Supply Spec. Rept.—
- New Jersey Div. Water Policy and Supply Water Resources Circ.—  
New Jersey Department of Conservation and Economic Development, Division of Water Policy and Supply Special Report *and* Water Resources Circular. Trenton, New Jersey.
- New Jersey State Dept. Health, Public Health News—New Jersey State Department of Health, Public Health News. Trenton, New Jersey.
- New Mexico Bur. Mines and Mineral Resources Ground-Water Rept.—New Mexico Bureau of Mines and Mineral Resources, Ground-Water Report. Socorro, New Mexico.
- New Mexico State Engineer Basic Data Rept.—
- New Mexico State Engineer Spec. Rept.—
- New Mexico State Engineer Tech. Rept.—  
New Mexico State Engineer Basic Data Rept. *and* Special Report *and* Technical Report. Santa Fe, New Mexico.
- New York Acad. Sci. Trans.—New York Academy of Science Transactions. New York, N. Y.
- New York State Dept. Commerce Bull.—New York State Department of Commerce . Bulletin. Albany, N. Y.

- New York State Dept. Health Research Rept.—New York State Department of Health Research Report. Albany, N. Y.
- New York State Legislative Doc.—New York State Legislative Document. Albany, N. Y.
- New York Water Resources Comm. Bull.—New York Water Resources Commission Bulletin. Albany, N. Y.
- North Carolina State College Soil Sci. Dept., Soils Inf. Ser.—North Carolina State College Soil Science Department, Soils Information Series. Raleigh, North Carolina.
- North Dakota Geol. Survey Bull.—
- North Dakota Geol. Survey Ground-Water Studies—  
North Dakota Geological Survey Bulletin *and* Ground-Water Studies. Grand Forks, North Dakota.
- North Dakota Water Conserv. Comm., County Ground-Water Studies—
- North Dakota Water Conserv. Comm., North Dakota Ground-Water Studies—  
North Dakota State Water Conservation Commission County Ground-Water Studies *and* North Dakota Ground-Water Studies. Bismarck, North Dakota.
- Northwest Sci.—Northwest Science, Washington State University. Pullman, Washington.
- Nuclear Safety—Nuclear Safety, U.S. Atomic Energy Commission. Superintendent of Documents. Washington, D. C.
- Ohio Div. Water Bull.—
- Ohio Div. Water, Ohio Water Plan Inventory Rept.—
- Ohio Div. Water Tech. Rept.—  
Ohio Division of Water Bulletin *and* Ohio Water Plan Inventory Report *and* Technical Report. Columbus, Ohio.
- Ohio Jour. Sci.—Ohio Journal of Science, Ohio State University. Columbus, Ohio.
- Oklahoma Geol. Survey Bull.—
- Oklahoma Geol. Survey Circ.—  
Oklahoma Geological Survey Bulletin *and* Circular. Norman, Oklahoma.
- Oklahoma Water Resources Board Bull.—Oklahoma Water Resources Board Bulletin. Oklahoma City, Oklahoma.
- Ontario Water Resources Comm. Ground-Water Bull.—Ontario Water Resources Commission Ground-Water Bulletin. Toronto, Canada.
- Ore-Bin.—The Ore-Bin. Oregon Department of Geology and Mineral Industries. Portland, Oregon.
- Oregon State Engineer Ground-Water Rept.—Oregon State Engineer Ground-Water Report. Salem, Oregon.
- Pennsylvania Geol. Survey, 4th Ser., Bull.—
- Pennsylvania Geol. Survey, 4th Ser., Ground-Water Rept.—  
Pennsylvania Geological Survey, 4th Series, Bulletin *and* Ground-Water Report. Harrisburg, Pennsylvania.
- Photogramm. Eng.—Photogrammetric Engineering, American Society of Photogrammetry. Washington, D. C.
- Physics of Fluids—Physics of Fluids, American Institute of Physics. New York, N. Y.
- Public Works—Public Works: City, County and State, Public Works Journal Corporation. Ridgewood, New Jersey.
- Purdue Univ. Eng. Bull.—
- Purdue Univ. Ext. Dept. Ser.—  
Purdue University Engineering Bulletin *and* Engineering Extension Department Series. Lafayette, Indiana.
- Radiolog. Health Data—Radiological Health Data, U.S. Public Health Service. Superintendent of Documents. Washington, D. C.

- XIV                    BIBLIOGRAPHY OF HYDROLOGY, 1963
- Rhode Island Water Resources Coordinating Board Geol. Bull.—
- Rhode Island Water Resources Coordinating Board Hydrol. Bull.—
- Rhode Island Water Resources Coordinating Board Geological Bulletin and Hydrological Bulletin. Providence, Rhode Island.
- Saskatchewan Research Council, Geology Div. Rept.—Saskatchewan Research Council, Geology Division Report. Saskatoon, Saskatchewan, Canada.
- Science—American Association for the Advancement of Science. Washington, D. C.
- Sci. Teacher—The Science Teacher. National Science Teacher Association. Washington, D. C.
- Sci. Am.—Scientific American, Scientific American, Inc. New York, N. Y.
- Sedimentology—Sedimentology. International Association of Sedimentology. Elsevier Publishing Co. Amsterdam, Netherlands.
- Smithsonian Inst. Pub.—Smithsonian Institution Publication. Washington, D. C.
- Soc. Petroleum Engineers Jour.—Society of Petroleum Engineers Journal. Society of Petroleum Engineers of AIME. Dallas, Texas.
- Soil Sci.—Soil Science, Williams and Wilkins Co. Baltimore, Maryland.
- Soil Sci. Soc. American Proc.—Soil Science Society of America Proceedings. Danville, Illinois.
- South Dakota Acad. Sci. Proc.—South Dakota Academy of Science Proceedings. Vermillion, South Dakota.
- South Dakota Geol. Survey Spec. Rept.—South Dakota State Geological Survey Special Report. Vermillion, South Dakota.
- South Texas Geol. Soc. Bull.—South Texas Geological Society Bulletin. San Antonio, Texas.
- Southeastern Geology—Southeastern Geology. Department of Geology, Duke University. Durham, North Carolina.
- Talanta—Talanta. Pergamon Press. Oxford, England.
- Tennessee Acad. Sci. Jour.—Journal of the Tennessee Academy of Science. Nashville, Tennessee.
- Tennessee Div. Water Resources Hydrol. Atlas—Tennessee Division of Water Resources Hydrologic Atlas. Nashville, Tennessee.
- Tennessee Valley Authority, Office of Tributary Area Devel. Research Paper—Tennessee Valley Authority, Office of Tributary Area Development Research Paper. Knoxville, Tennessee.
- [Texas] Edwards Underground Water District Bull.—[Texas] Edwards Underground Water District Bulletin. San Antonio, Texas.
- Texas Water Comm. Bull.—
- Texas Water Comm. Circ.—
- Texas Water Comm. Memo. Rept.—
- Texas Water Commission Bulletin and Circular and Memorandum Report. Austin, Texas.
- Thorntwaite, C. W., Associates, Lab. Climatology, Publications in Climatology—C. W. Thorntwaite Associates, Laboratory of Climatology, Publications in Climatology. Centerton, New Jersey.
- U.N. ECAFE, Bur. Flood Control and Water Resources Devel. Water Resources Ser.—United Nations Economic Commission for Asia and the Far East, Bureau of Flood Control and Water Resources Development, Water Resources Series. Bangkok, Thailand.
- U.N. ECAFE Mineral Resources Devel. Ser.—United Nations Economic Commission for Asia and the Far East, Natural Resources Division, Mineral Resources Development Series. Bangkok, Thailand.
- UNESCO Arid Zone Research Ser.—United Nations Educational, Scientific and Cultural Organization Arid Zone Research Series. Paris, France.

- U.S. Agr. Research Service—U.S. Department of Agriculture, Agricultural Research Service [ARS series]. Washington, D. C.
- U.S. Army Cold Regions Research and Eng. Lab., CRREL Rept.—
- U.S. Army Cold Regions Research and Eng. Lab. Research Rept.—  
U.S. Army Cold Regions Research and Engineering Laboratory CRREL Report and Research Report. Hanover, New Hampshire.
- U.S. Army Corps of Eng. Beach Erosion Board Tech. Memo.—U.S. Army Corps of Engineers Beach Erosion Board Technical Memorandum. Washington, D. C.
- U.S. Army Corps of Engineers, Waterways Expt. Sta., Vicksburg, Miss., Tech. Rept.—  
U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, Mississippi. Technical Report.
- U.S. Atomic Energy Comm., Div. Tech. Inf.—U.S. Atomic Energy Commission Division of Technical Information [TID series]. Washington, D. C.
- U.S. Atomic Energy Comm. Research and Devel. Rept.—U.S. Atomic Energy Commission Research and Development Report. Washington, D. C.
- U.S. Bur. Reclamation Hydraulics Branch Rept.—U.S. Bureau of Reclamation Hydraulics Branch. Hydraulics Laboratory Report. Denver, Colorado.
- U.S. Bur. Reclamation Tech. Record Design and Construction—U.S. Bureau of Reclamation Technical Record of Design and Construction. Denver, Colorado.
- U.S. Bur. Reclamation, Water Resources Tech. Pub. Research Rept.—U.S. Bureau of Reclamation, Water Resources Technical Publication Research Report. Washington, D. C.
- U.S. Bur. Mines Rept. Inv.—U.S. Bureau of Mines Report of Investigations. Washington, D. C.
- U.S. Dept. Agriculture Misc. Pub.—
- U.S. Dept. Agriculture Production Research Rept.—
- U.S. Dept. Agriculture Tech. Bull.—  
U.S. Department of Agriculture Miscellaneous Publication and Production Research Report and Technical Bulletin. Washington, D. C.
- U.S. Federal Council, Sci. Technology Pub.—U.S. Federal Council for Science and Technology Publication. Washington, D. C.
- U.S. Inter-Agency Comm. Oceanography ICO Pamph.—U.S. Inter-Agency Committee on Oceanography ICO Pamphlet. Washington, D. C.
- U.S. Forest Service Research Note—
- U.S. Forest Service Research Paper—  
U.S. Forest Service Research Note, and Research Paper. Washington, D. C.
- U.S. Geol. Survey Bull.—
- U.S. Geol. Survey Circ.—
- U.S. Geol. Survey Hydrol. Inv. Atlas—
- U.S. Geol. Survey Misc. Rept.—
- U.S. Geol. Survey Prof. Paper—
- U.S. Geol. Survey Water-Supply Paper—  
U.S. Geological Survey Bulletin and Circular and Hydrologic Investigation Atlas and Miscellaneous Report and Professional Paper and Water-Supply Paper. Washington, D. C.
- U.S. Inter-Agency Comm. on Water Resources, Subcommittee on Sedimentation, St. Anthony Falls Hydraulic Lab. Rept.—U.S. Inter-Agency Committee on Water Resources, Subcommittee on Sedimentation, St. Anthony Falls Hydraulic Laboratory Report. Washington, D. C.
- U.S. Natl. Bur. Standards Misc. Pub.—U.S. National Bureau of Standards Miscellaneous Publication. Washington, D. C.

- U.S. Office of Saline Water Research and Devel. Prog. Rept.—U.S. Office of Saline Water, Research and Development Progress Report. Washington, D. C.
- U.S. Public Health Service Pub.—
- U.S. Public Health Service, Water Supply and Pollution Control Div. Pub.—  
U.S. Public Health Service Publication and Water Supply and Pollution Control Division Publication. Washington, D. C.
- U.S. Robert A. Taft Sanitary Eng. Center Tech. Rept.—U.S. Public Health Service, Robert A. Taft Sanitary Engineering Center Technical Report. Cincinnati, Ohio.
- U.S. Weather Bur. Research Paper—U.S. Weather Bureau Research Paper. Washington, D. C.
- Utah Geol. and Mineralog. Survey Water-Resources Bull.—Utah Geological and Mineralogical Survey Water-Resources Bulletin. Salt Lake City, Utah.
- Utah State Engineer Basic-Data Rept.—Utah State Engineer Basic-Data Report. Salt Lake City, Utah.
- Washington [State] Div. Power Resources Bull.—Washington [State] Division of Power Resources Bulletin. Olympia, Washington.
- Washington [State] Div. Water Resources. Water Supply Bull.—Washington [State] Division of Water Resources. Water Supply Bulletin. Olympia, Washington.
- Washington [State] Univ. Dept. Oceanography Tech. Rept.—University of Washington Department of Oceanography Technical Report. Seattle, Washington.
- Water Pollution Control Federation Jour.—Water Pollution Control Federation Journal. Washington, D. C.
- West Virginia Acad. Sci. Proc.—West Virginia Academy of Science Proceedings. Morgantown, West Virginia.

## BIBLIOGRAPHY

---

- 0056 **Abu-Zied, M. A.; Scott, V. H.** Nonsteady flow for wells with decreasing discharge: Am. Soc. Civil Engineers Proc. Paper 3517, Hydraulics Div. Jour., v. 89, no. HY3, p. 119-132, May 1963.
- Adams, J. K.** *See* Boggess, D. H. 0135
- 1468 **Adams, J. K.; Boggess, D. H.** Water-table, surface-drainage, and engineering soils map of the St. Georges area, Delaware: U.S. Geol. Survey Hydrol. Inv. Atlas HA-60, one sheet, July 1963.
- Adderly, E. E.** *See* Smith, E. J. 0856
- Adolphson, D. G.** *See* Bradley, Edward. 0265
- Agee, J. H.** *See* Towne, W. W. 1265
- 0058 **Ahnert, Frank.** Distribution of estuarine meanders. Final report, Project NR 388-069, Contract Nonr (G)-00048-62, Office of Naval Research: College Park, Maryland Univ., Dept. of Geography, 69 p., 1963.
- Ahumada, A. A.** *See* Siliceo, E. P. 1004
- Akin, P. D.** *See* Jones, J. R. 0347
- 0071 **Alaska Dept. of Health and Welfare** Greater Anchorage water pollution survey, July 17, 1961-November 30, 1961: Alaska Dept. Health and Welfare Hydrol. Data [Rept.] 20, 12 p., 1963.
- 0072 **Alexander, G. N.** Using the probability of storm transposition for estimating the frequency of rare floods: Jour. Hydrology [Amsterdam], v. 1, no. 1, p. 46-57, 1963.
- 0059 **Alger, R. P.** (and others) Formation density log applications in liquid-filled holes: Jour. Petroleum Technology, v. 15, no. 3, p. 321-332, Mar. 1963.
- Allen, H. E.** *See* Ellis, D. W. 0210
- Allen, H. E.** *See* Ellis, D. W. 0211
- Allen, H. E.** *See* Ellis, D. W. 0213
- Allen, H. E.** *See* Ellis, D. W. 0214
- Allen, H. E.** *See* Ellis, D. W. 0215
- 0060 **Allen, W. B.; Hahn, G. W.; Tuttle, C. R.** Geohydrological data for the upper Pawcatuck River basin, Rhode Island: Rhode Island Water Resources Coordinating Board Geol. Bull. 13, 68 p., 1963.

- 0061 **Allis, J. A.; Harris, B.; Sharp, A. L.** A comparison of performance of five rain-gage installations: *Jour. Geophys. Research*, v. 68, no. 16, p. 4723-4729, Aug. 15, 1963.
- 0062 **Aly, O. M.; Faust, S. D.** Determination of 2, 4-Dichlorophenoxy acetic acid in surface waters: *Am. Water Works Assoc. Jour.*, v. 55, no. 5, p. 639-646, May 1963.
- 0063 **Ambach, W.; Hoinkes, H.** The heat balance of an alpine snowfield: *Internat. Assoc. Sci. Hydrology Pub.* 61, p. 24-36, 1963.
- 0069 **American Soc. for Testing and Materials** Report of Committee D-19 on industrial water: *Am. Soc. Testing Materials Proc.* v. 63, p. 412-416, 1963.
- 0070 **American Society of Civil Engineers** Bibliography on cement grouting—Second progress report, Committee on Grouting, Soil Mechanics and Foundations Division: *Am. Soc. Civil Engineers Proc. Paper* 3575, Soil Mechanics and Foundations Div. *Jour.*, v. 89, no. SM4, p. 45-89, July 1963.
- 0080 **American Society of Civil Engineers.** Friction factors in open channels—Progress report of the Task Force on Friction Factors in Open Channels of the Committee on Hydromechanics, Hydraulics Division: *Am. Soc. Civil Engineers Proc. Paper* 3464, Hydraulics Div. *Jour.*, v. 89, no. HY2, p. 97-143, Mar. 1963.
- 0081 **American Society of Civil Engineers.** Sediment transportation mechanics—Suspension of sediment—Progress report, Task Committee on Preparation of Sedimentation Manual, Committee on Sedimentation, Hydraulics Division: *Am. Soc. Civil Engineers Proc. Paper* 3636, Hydraulics Div. *Jour.*, v. 89, no. HY5, p. 45-76, Sept. 1963.
- 0082 **American Society of Civil Engineers.** Sediment transportation mechanics—Density currents—Progress report, Task Committee on Preparation of Sedimentation Manual, Committee on Sedimentation, Hydraulics Division: *Am. Soc. Civil Engineers Proc. Paper* 3639, Hydraulics Div. *Jour.*, v. 89, no. HY5, p. 77-87, Sept., 1963.
- 0073 **American Water Works Association.** Design and operation of recharge basins—Report of Task Group 2440R—Artificial Ground Water Recharge: *Am. Water Works Assoc. Jour.*, v. 55, no. 6, p. 697-704, June 1963.
- 0074 **American Water Works Association.** Artificial ground water recharge—Report of Task Group 2440-R—Artificial Ground Water Recharge: *Am. Water Works Assoc. Jour.*, v. 55, no. 6, p. 705-709, June 1963.
- 0075 **American Water Works Association.** Evaluation of legislation to control synthetic detergents—Report on Task Group 2661 P—Effects on Water Supplies of Synthetic Detergents: *Am. Water Works Assoc. Jour.*, v. 55, no. 10, p. 1229-1236, Oct. 1963.
- 0076 **American Water Works Association.** Fluoridation of public water supplies—statement of recommended policy: *Am. Water Works Assoc. Jour.*, v. 55, no. 6, p. 677-682, June 1963.
- 0077 **American Water Works Association.** Status of fluoridation in the United States and Canada, 1961—Report of Task Group 2620 P—Fluoridation Materials and Methods: *Am. Water Works Assoc. Jour.*, v. 55, no. 5, p. 571-580, May 1963.
- 0078 **American Water Works Association.** Developments in saline-water conversion, 1962—Report of Committee 3120 P—Saline Water Conversion: *Am. Water Works Assoc. Jour.*, v. 55, no. 5, p. 565-570, May 1963.
- 0079 **American Water Works Association.** Survey of methods for evaporation control—Report of Task Group 2480-R, Evaporation Control: *Am. Water Works Assoc. Jour.*, v. 55, no. 2, p. 157-168, Feb. 1963.

- 0055 **Amoroch, J.** Measures of the linearity of hydrologic systems: *Jour. Geophys. Research*, v. 68, no. 8, p. 2237-2249, Apr. 15, 1963.
- 0054 **Amstutz, R. W.; Reynolds, L. C.** Engineering aspects of waterflood bacteriology: *Jour. Petroleum Technology*, v. 15, no. 10, p. 1073-1076, Oct. 1963.
- 0053 **Anandakrishnan, M.; Varadarajulu, G. H.** Laminar and turbulent flow of water through sand: *Am. Soc. Civil Engineers Proc. Paper 3631, Soil Mechanics and Foundations Div. Jour.*, v. 89, no. 8M5, p. 1-15, Sept. 1963.
- 0052 **Anders, R. B.; Naftel, W. L.** Pumpage of ground water and changes in water levels in Galveston County, Texas, 1958-1962: *Texas Water Comm. Bull.* 6303, 32 p., Mar. 1963.
- 0051 **Anderson, B. G.** Preliminary report on glaciology and glacial geology of the Theil Mountains, Antarctica: Art. 37 in *U.S. Geol. Survey Prof. Paper 475-B*, p. B140-B143, June 1963.
- Anderson, D. B.** See Ducret, G. L., Jr. 0190
- 0049 **Anderson, D. M.; Sposito, Garrison; Linville, A.** Temperature fluctuations at a wetting front. II. The effect of initial water content of the medium on the magnitude of the temperature fluctuations: *Soil Sci. Soc. America Proc.*, v. 27, no. 4, p. 367-369, July-Aug. 1963.
- 1467 **Anderson, D. M.; Linville, A.; Sposito, Garrison.** Temperature fluctuations at a wetting front. III. Apparent activation energies for water movement in the liquid and vapor phases: *Soil Sci. Soc. America Proc.*, v. 27, no. 6, p. 610-613, Nov.-Dec. 1963.
- 1283 **Anderson, D. V.; Rodgers, G. K.** A synoptic survey of Lake Superior, in *Great Lakes Research Conf.*, 6th, Ann Arbor, Michigan, 1963, Proc.: Michigan Univ. Great Lakes Research Div. Pub. 10, p. 79-89, 1963.
- 1325 **Anderson, E. P.** Audel's domestic water supply and sewage disposal guide—A practical treatise: New York, T. Audel, 444 p., 1963.
- Anderson, E. T.** See White, D. E., 1146
- 0048 **Anderson, E. W.** Our native range—A new horizon in soil, water and plant conservation: *Jour. Range Management*, v. 16, no. 4, p. 179-184, July 1963.
- Anderson, H. R.** See Gill, H. E. 0777
- 0046 **Anderson, H. W.; McDonald, P. M.; Gay, L. W.** Use of radioactive sources in measuring characteristics of snowpacks: *U.S. Forest Service Research Note PSW-11*, 9 p., 1963.
- 0047 **Anderson, H. W.** Managing California's snow zone lands for water: *U.S. Forest Service Research Paper PSW-6*, 28 p., 1963.
- 0083 **Anderson, H. W.** (and others) Evaporative loss from soil, native vegetation and snow as affected by hexadecanol: *Internat. Assoc. Sci. Hydrology Pub.* 62, p. 7-12, 1963.
- Anderson, I. E.** See Carter, R. W. 1500
- Anderson, J. C.** See Landgren, N. E. 0290
- 0045 **Anderson, P. W.** Variations in the chemical character of the Susquehanna River at Harrisburg, Pennsylvania: *U.S. Geol. Survey Water-Supply Paper 1779-B*, p. B1-B17, Dec. 1963.

**Anderson, P. W.** *See* Durfor, C. N. 0196

**Anderson, P. W.** *See* George, J. R. 0774

0044 **Andreasen, G. E.; Brookhart, J. W.** Reverse water-level fluctuations. *in* Bentall, Ray, compiler, Methods of collecting and interpreting ground-water data: U.S. Geol. Survey Water-Supply Paper 1544-H, p. H1-H35, Dec. 1963.

0043 **Archer, R. J.; Shaughnessy, J. A.** Water quality in the Delaware River Basin, New York: New York State Dept. Commerce Bull. 5, 68 p., 1963.

**Archer, R. J.** *See* Doll, W. L. 0183

1411 **Ariizumi, A.; Kondo, O.** Investigation of the movement of infiltrating acidic hot-spring water in the ground by means of radioisotopes, *in* Radioisotopes in hydrology, Proc. Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, p. 365-381, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]

0963 **Ariizumi, Akira; Kondo, Osamu.** Measurement of river-bed variations during a flood, *in* Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, p. 237-253, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]

1373 **Arizona Water Resources Committee.** (and Arizona State Land Department) Water conservation from mountains to deserts: Arizona Watershed Symposium, 7th ann. mtg., Phoenix, Ariz., Sept. 18, 1963, Proc., 40 p., 1963.

0041 **Arkley, R. J.** Calculation of carbonate and water movement in soil from climatic data: Soil Sci., v. 96, no. 4, p. 239-248, Oct. 1963.

**Armbrust, D. V.** *See* Cheipil, W. S. 0251

**Armstrong, C. A.** *See* Heindl, L. A. 0831

1452 **Armstrong, C. A.** Ground-water resources near Max, McLean and Ward Counties, North Dakota: North Dakota Water Conserv. Comm., North Dakota Ground-Water Studies 45, 24 p., 1963.

0068 **Armstrong, F. A. J.** Determination of nitrate in water by ultraviolet spectrophotometry: Anal. Chemistry, v. 35, no. 9, p. 1291-1294, Aug. 1963.

1341 **Arnow, Ted.** Ground-water geology of Bexar County, Texas: U.S. Geol. Survey Water-Supply Paper 1588, 36 p., July 1963. [Abbreviated version published in South Texas Geol. Soc. Bull., v. 3, no. 13, p. 3-27, Oct. 1963.]

1237 **Arvola, W. A.; Raimundo, A. L.** Operational forecasting of the day-to-day runoff in the Feather River Basin, *in* Western Snow Conference, 31st ann. mtg., Yosemite Natl. Park, Calif., 1963, Proc.: Tacoma, Wash., p. 1-5, 1963.

0064 **Ash, S. R.** Ground-water conditions in northern Lea County, New Mexico: U.S. Geol. Survey Hydrol. Inv. Atlas HA-62, two sheets, Sept. 1963.

0065 **Asmussen, L. E.; Dendy, F. E.** A report on geological and ground-water investigations in Pigeon Roost Creek watershed, Marshall County, Mississippi: Southeastern Geology, v. 5, no. 1, p. 1-21, Sept. 1963.

**Asselstine, E. S.** *See* Weld, B. A. 1181

0066 **Atkins, C. H.** Status of water pollution control in the United States: Am. Water Works Assoc. Jour., v. 55, no. 9, p. 1110-1114, Sept. 1963.

- 1255 **Austin, J. H.** Strontium uptake by algae, in Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm. Div. Tech. Inf. TID-7664, p. 231-246, July 1963.
- Avrett, J. R.** *See* Powell, W. J. 1471
- 0067 **Ayer, G. R.; Pauszek, F. H.** Creeks, brooks and rivers in Rockland County, New York and their relation to planning for the future: New York State Dept. Commerce Bull. 6, 140 p., 1963.
- Aylmore, L. A. G.** *See* LaMer, V. K. 0287
- 0084 **Back, William.** Preliminary results of a study of calcium carbonate saturation of ground water in central Florida: Internat. Assoc. Sci. Hydrology Bull., v. 8, no. 3, p. 43-51, Sept. 1963.
- 0085 **Baczek, Maria; Cunge, Jan.** Notes on the temporary water level method of unsteady flow computation in river channels: Washington, D. C., Office of Tech. Services, OTS 61-31328, 15 p. (Translated from the Polish Journal Gospodarka Wodna, v. 18, no. 5, p. 194-198, 1958). 1963.
- Bader, J. C.** *See* Dutcher, L. C. 0200
- Bailey, J. G.** *See* Toombs, G. L. 1368
- 0086 **Bailey, N. G.** The power auger in ground-water exploration in Ohio: Ground Water, v. 1, no. 3, p. 15-17, July 1963.
- 1282 **Bajorunas, L.** Natural regulation of the Great Lakes, in Great Lakes Research Conf., 6th, Ann Arbor, Michigan, 1963, Proc.: Michigan Univ. Great Lakes Research Div. Pub. 10, p. 183-190, 1963.
- 0087 **Baker, B. B.; Dillard, J. W.; Souders, V. L.; Peckham, R. C.** Reconnaissance investigation of the ground-water resources of the Sabine River basin, Texas: Texas Water Comm. Bull. 6307, 57 p., Aug. 1963.
- 0088 **Baker, B. B.; Peckham, R. C.; Dillard, J. W.; Souders, V. L.** Reconnaissance investigation of the ground-water resources of the Neches River basin, Texas: Texas Water Comm. Bull. 6308, 67 p., Aug. 1963.
- Baker, B. B.** *See* Peckham, R. C. 0596
- 0090 **Baker, E. T., Jr.** Ground-water geology of Grayson County, Texas: U.S. Geol. Survey Water-Supply Paper 1646, 61 p., May 1963.
- 1457 **Baker, E. T., Jr.; Long, A. T.; Reeves, R. D.; Wood, L. A.** Reconnaissance investigation of the ground-water resources of the Red River, Sulphur River, and Cypress Creek Basins, Texas: Texas Water Comm. Bull. 6306, 127 p., July 1963.
- 0091 **Baker, G. K.** Ground-water supply for the city of Claremont, South Dakota: South Dakota Geol. Survey Spec. Rept. 25, 23 p., June 1963.
- 0092 **Baker, G. K.** Water supply for the city of Beresford: South Dakota Geol. Survey Spec. Rept. 22, 34 p., June 1963.
- Baker, Stanley.** *See* Weaver, Leo. 1171
- Baldwin, Brewster.** *See* Spiegel, Zane. 0871
- 0093 **Baldwin, H. L.; McGuinness, C. L.** A primer on ground water: U.S. Geol. Survey Misc. Rept., 26 p., Nov. 1963.
- Baldwin, H. L.** *See* Swindel, G. W., Jr. 1021

- 0094 **Baldwin, P. C.** The old mill stream: Am. Forests, v. 69, no. 4, p. 28-30, 37, 38, Apr. 1963.
- 0095 **Ballance, W. C.** Ground-water levels in New Mexico, 1962: New Mexico State Engineer Basic-Data Rept., 126 p., 1963.
- 0096 **Ballinger, D. G.** Polarographic methods for water and wastes: Water Pollution Control Federation Jour., v. 35, no. 1, p. 116-122, Jan. 1963.
- Banerji, S. K.** See Ewing, B. B. 1240
- Banta, H. E.** See Volborth, Alexis. 1120
- 0097 **Barker, F. B.; Robinson, B. P.** Determination of beta activity in water: U.S. Geol. Survey Water-Supply Paper 1696-A, p. A1-A32, Mar. 1963.
- 0098 **Barlow, A. C.** Industry looks at saline ground water: Ground Water, v. 1, no. 1, p. 25-27, Jan. 1963.
- 1502 **Barnes, Cynthia; Giefer, G. J.** (compilers) Index to periodical literature on aspects of water in California: California Univ. Water Resources Center Archives, Archives Ser. Rept. 14, 337, p., May 1963.
- Barnett, C. R.** See Feely, H. W. 0634
- 1326 **Barron, E. G.** New instruments for surface-water investigations, in Mesnier, G. N., and Iseri, K. T., compilers, Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, p. Z1-Z12, Nov. 1963.
- Barthel, J.** See Krombach, H. 0392
- 0100 **Batchelder, A. R.; Lunin, J.; Gallatin, M. H.** Saline irrigation of several vegetable crops at various growth stages. II. Effect on cation composition of crops and soils: Agronomy Jour., v. 55, no. 2, p. 111-114, Mar.-Apr. 1963.
- Bayley, F. H., III.** See Engler, Kyle. 0222
- Bayley, F. H., III.** See Sniegocki, R. T. 0862
- Beard, A. H., Jr.** See Lewis, D. D. 0489
- 0101 **Beard, L. R.** Flood control operation of reservoirs: Am. Soc. Civil Engineers Proc. Paper 3380, Hydraulics Div. Jour., v. 89, no. HY1, p. 1-23, Jan. 1963.
- 0102 **Beaty, C. B.** Origin of alluvial fans, White Mountains, California and Nevada: Assoc. Am. Geographers Annals, v. 53, no. 4, p. 516-535, Dec. 1963.
- 0103 **Beaumont, R. T.; Work, R. A.** Snow sampling results from three samplers: Internat. Assoc. Sci. Hydrology Bull. v. 8, no. 4, p. 74-78, Dec. 1963.
- 1458 **Beckman, G. E.** Determination of river dispersion factors: U.S. Atomic Energy Comm. Research and Devel. Rept. HW-SA-3056, 20 p., May 1963. [Available from U.S. Dept. Commerce, Office of Tech. Services.]
- 1426 **Bedinger, M. S.; Emmett, L. F.** Mapping transmissibility of alluvium in the lower Arkansas River valley, Arkansas: Art. 107 in U.S. Geol. Survey Prof. Paper 475-C, p. C188-C190, Nov. 1963.
- 1456 **Bedinger, M. S.; Emmett, L. F.; Jeffery, H. G.** Ground-water potential of the alluvium of the Arkansas River between Little Rock and Fort Smith, Arkansas: U.S. Geol. Survey Water-Supply Paper 1669-L, p. L1-L29, Nov. 1963.
- 0105 **Behnke, J. J.; Schiff, Leonard.** Hydraulic conductivity of uniform, stratified, and mixed sands: Jour. Geophys. Research, v. 68, no. 16, p. 4769-4775, Aug. 15, 1963.

- 0106 **Bell, E. A.; Kellogg, R. W.; Kulp, W. K.** Progress report on the ground-water resources of the Louisville area, Kentucky, 1949-55: U.S. Geol. Survey Water Supply Paper 1579, 47 p., Aug. 1963.
- 0107 **Belter, W. G.** Waste management activities in the Atomic Energy Commission: Ground Water, v. 1, no. 1, p. 17-24, Jan. 1963.
- 0108 **Belter, W. G.; Bernard, Harold.** Status of radioactive liquid waste management in the United States: Water Pollution Control Federation Jour., v. 35, no. 2, p. 168-185, Feb. 1963.
- Bender, J. A.** See Yen, Yin-Chao. 1221
- Bender, Robert.** See Brindley, G. W. 0275
- Bennett, G. D.** See Patten, E. P., Jr. 0591
- Bennett, G. D.** See Carswell, L. D. 1492
- 0109 **Benoit, G. R.; Kirkham, D.** The effect of soil surface conditions on evaporation of soil water: Soil Sci. Soc. American Proc., v. 27, no. 5, p. 495-498, Sept.-Oct. 1963.
- 0110 **Benson, M. A.** Flood peaks related to hydrologic factors in the southwest: Art. 229 in U.S. Geol. Survey Prof. Paper 450-E, p. E161-E163, Mar. 1963.
- Benson, M. A.** See Conover, W. J. 0401
- 0111 **Bentall, Ray.** (compiler) Methods of collecting and interpreting ground-water data: U.S. Geol. Survey Water-Supply Paper 1544-H, p. H1-H97, Dec. 1963.
- 0112 **Bentall, Ray.** (compiler) Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C1-C117, 1963 [Jan. 1964].
- 0113 **Bentall, Ray.** (compiler) Methods of determining permeability, transmissibility, and drawdown: U.S. Geol. Survey Water-Supply Paper 1536-I, p. 243-341, Dec. 1963.
- 0114 **Benz, L. C.** (and others) Small and large-diameter water-table observation wells compared: Am. Soc. Agr. Engineers Trans. (Gen. Ed.), v. 6, no. 2, p. 93-94, 97. Sept. 1963.
- 0115 **Berg, Brian; Lane, R. W.; Larsen, T. E.** Water use and related costs with cooling towers: Illinois State Water Survey Circ. 86, 18 p., 1963.
- Berg, T. E.** See Black, R. F. 0130
- Bergamini, Gabriella.** See Gray, D. H. 0789
- 0116 **Bergen, J. D.** Vapor transport as estimated from heat flow in a Rocky Mountain snowpack: Internat. Assoc. Sci. Hydrology Pub. 61, p. 62-74, 1963.
- 0117 **Berger, B. B.** The scientist and water pollution control research: Texas A and M Univ., Water Resources Inst., Water for Texas Conf., 8th ann. College Station, Texas, 1963, Proc., p. 37-41, 1963.
- 0118 **Bergman, D. L.; Sullivan, C. W.** Channel changes on Sandstone Creek near Cheyenne, Oklahoma: Art. 97 in U.S. Geol. Survey Prof. Paper 475-C, p. C145-C148, Nov. 1963.
- 0119 **Bermes, B. J.; Leve, G. W.; Tarver, G. R.** Ground-water records of Flagler, Putnam and St. Johns Counties, Florida: Florida Geol. Survey Inf. Circ. 37, 89 p., 1963.

- 0119 **Bermes, B. J.; Leve, G. W.; Tarver, G. R.** Geology and ground-water resources of Flagler, Putnam, and St. Johns Counties, Florida: Florida Geol. Survey Rept. Inv. 32, 97 p., 1963.
- Bernard, Harold.** *See* Belter, W. G. 0108
- 1269 **Bernard, Harold.** New developments in the management of low- and intermediate-level radioactive wastes, *in* Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112, (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 389-408, 1963.
- Berry, D. W.** *See* Robinove, C. J. 0931
- 1355 **Bersticker, A. C.; Hoekstra, K. E.; Hall, J. F.** (editors) Symposium on salt: Cleveland, The Northern Ohio Geol. Soc., Inc., 661 p., 1963.
- 1357 **Bessey, R. F.** Pacific northwest regional planning—A review: Washington [State] Div. Power Resources Bull. 6, 201 p., 1963.
- 0120 **Bethlahmy, Nedavia.** Rapid calibration of watersheds for hydrologic studies: Internat. Assoc. Sci. Hydrology Bull., v. 8, no. 3, p. 38-42, Sept. 1963.
- Bhattacharyya, B. K.** *See* vanEverdingen, R. O. 1108
- 0121 **Bianchi, W. C.; Haskell, E. E., Jr.** A strain gage pressure cell for rapid determination of hydraulic conductivity of soil cores: Am. Soc. Testing and Materials Proc., v. 63, p. 1227-1234, 1963.
- 0122 **Biemond, Cornelius.** Relation of river pollution to public water supply in Europe and the United States: Am. Water Works Assoc. Jour., v. 55, no. 7, p. 917-929, July 1963.
- 0123 **Biggar, J. W.; Nielsen, D. R.** Miscible displacement. V. Exchange processes: Soil Sci. Soc. America Proc., v. 27, no. 6, p. 623-627, Nov.-Dec. 1963.
- Biggar, J. W.** *See* Davidson, J. M. 0161
- Biggar, J. W.** *See* Corey, J. C. 0407
- Biggar, J. W.** *See* Nielsen, D. R. 0474
- Biggar, J. W.** *See* Nielsen, D. R. 0475
- 0124 **Bingham, R. H.; Moore, G. K.** Well water for home supplies in Montgomery County [Tennessee]: Tennessee Div. Water Resources Hydrol. Atlas 2, 10 p., Dec. 1963.
- 0125 **Bingham, R. H.** Summary of ground-water levels in Tennessee, 1952-61: Tennessee Acad. Sci. Jour., v. 38, no. 4, p. 126-132, Oct. 1963.
- Bittinger, M. W.** *See* Trelease, F. J. 0925
- 1301 **Bittinger, M. W.; Stringham, G. E.** A study of phreatophyte growth in the lower Arkansas River valley of Colorado: Fort Collins, Colorado Agr. Expt. Sta., 31 p., Apr. 1963.
- Bittinger, M. W.** *See* Maasland, D. E. L. 1356
- 0126 **Bjorklund, L. J.** Carlsbad area, *in* Thomas, H. E., and others, Effects of drought in the Rio Grande Basin: U.S. Geol. Survey Prof. Paper 372-D, p. D43-D48, Mar. 1963.
- 0127 **Black, A. P.; Christman, R. F.** Characteristics of colored surface waters: Am. Water Works Assoc. Jour., v. 55, no. 6, p. 753-770, June 1963.

- 0128 **Black, A. P.; Christman, R. F.** Chemical characteristics of fulvic acids: Am. Water Works Assoc. Jour., v. 55, no. 7, p. 897-912, July 1963.
- 0129 **Black, A. P.** (and others) Stoichiometry of the coagulation of color-causing organic compounds with ferric sulfate: Am. Water Works Assoc. Jour., v. 55, no. 10, p. 1347-1366, Oct. 1963.
- 0130 **Black, R. F.; Berg, T. E.** Hydrothermal regimen of patterned ground, Victoria Land, Antarctica: Internat. Assoc. Sci. Hydrology Pub. 61, p. 121-127, 1963.
- Blair, R. D.** *See* Stierle, Harry. 1273
- Blakey, J. F.** *See* Mendieta, H. B. 0647
- Blanchard, H. E., Jr.** *See* Callahan, J. T. 0032
- 0131 **Blaney, H. F.; Criddle, W. D.** Determining consumptive use and irrigation water requirements from climatological and irrigation data: Irrig. Eng. and Maintenance, v. 13, no. 3, p. 19-20, 26, Apr. 1963.
- 0679 **Bliss, J. H.** Water quality changes in Elephant Butte reservoir: Am. Soc. Civil Engineers Proc. Paper 3637, Irrig. and Drainage Div. Jour., v. 89, no. IR 3, p. 53-76, Sept. 1963.
- 0133 **Blocker, Wras; Bower, David.** Filter for sampling sediment in small streams: Jour. Soil and Water Conserv., v. 18, no. 6, p. 222, Nov.-Dec. 1963.
- Bloodworth, M. E.** *See* Mistry, P. D. 0410
- Boes, R. J.** *See* Cleary, E. J. 0229
- 0134 **Boettcher, A. J.** Prospects for irrigation in eastern Cheyenne and Kiowa Counties, Colorado: Colorado Water Conserv. Board Ground-Water Circ. 7, 12 p., Mar. 1963.
- 0135 **Boggess, D. H.; Adams, J. K.** Water-table, surface-drainage, and engineering soils map of the Newark area, Delaware: U.S. Geol. Survey Hydrol. Inv. Atlas HA-64, one sheet, Oct. 1963.
- Boggess, D. H.** *See* Adams, J. K. 1468
- 0136 **Bogue, S. H.** Trends in water use: Am. Water Works Assoc. Jour., v. 55, no. 5, p. 548-554, May 1963.
- Boland, Paul.** *See* Fleming, J. D. 0754
- Borland, W. M.** *See* Miller, C. R. 0663
- Bosch, H. M.** *See* Wolman, Abel. 1148
- 0137 **Boswell, E. H.** Cretaceous aquifers of northeastern Mississippi: Mississippi Board Water Commissioners Bull. 63-10, 202 p., Sept. 1963.
- 0138 **Boswell, E. H.; Ellison, B. E., Jr.; Harvey, E. J.** Interim report on ground-water study in Alcorn County, Mississippi: Mississippi Board Water Commissioners Bull. 63-3, 39 p., Mar. 1963.
- Boswell, E. H.** *See* Ellison, B. E., Jr. 0218
- 1286 **Bouldin, V. W.** Social and legal problems in water resources planning: Texas A and M Univ., Water Resources Inst., Water for Texas Conf., 8th ann., College Station, Texas, 1963, Proc., p. 18-21, 1963.

- 0139 **Bouwer, Herman.** Theoretical effect of unequal water levels on the infiltration rate determined with buffered cylinder infiltrometers: *Jour. Hydrology* [Amsterdam], v. 1, no. 1, p. 29-34, 1963.
- 0262 **Bouwer, Herman; Rice, R. C.** Seepage meters in seepage and recharge studies: *Am. Soc. Civil Engineers Proc. Paper 3448, Irrig. and Drainage Div. Jour.*, v. 89, no. IR1, p. 17-42, Mar. 1963.
- 0263 **Bower, B. T.** Some physical, technological, and economic characteristics of water and water resources systems—Implications for administration: *Nat. Resources Jour.*, v. 3, no. 2, p. 215-238, Oct. 1963.
- Bower, David.** *See* Blocker, Wras. 0133
- Bowers, S. A.** *See* Hanks, R. J. 0804
- Bowers, S. A.** *See* Hanks, R. J. 0805
- 1364 **Boyer, P. B.** Method of computing average reservoir temperature, *in* Water temperature—Influences, effects, and control: U.S. Public Health Service Pacific NW Water Lab., Pacific NW Symposium on Water Pollution Research, 12th, Corvallis, Oreg., 1963, Proc., p. 78-99, Nov. 1963.
- 0264 **Bradford, G. R.** Lithium survey of California's water resources: *Soil Sci.*, v. 96, no. 2, p. 77-81, Aug. 1963.
- 0265 **Bradley, Edward; Petri, L. R.; Adolphson, D. G.** Geology and ground-water resources of Kidder County, North Dakota, part 3, Ground water and chemical quality of water: *North Dakota Geol. Survey Bull.* 36, and *North Dakota Water Conserv. Comm. County Ground-Water Studies* 1, 38 p., 1963.
- Bradley, Edward.** *See* Jensen, H. M. 1454
- 1248 **Bradley, W. F.** Heterogeneous equilibria in sediment under transport, *in* Kornegay, B. H., and others, editors, *Transport of radionuclides in fresh water systems*: U.S. Atomic Energy Comm., Div. Tech. Inf. TID-7664, p. 61-70, July 1963.
- 0266 **Brakensiek, D. L.** Estimating coefficients for storage flood routing: *Jour. Geophys. Research*, v. 68, no. 24, p. 6471-6474, Dec. 15, 1963.
- 0267 **Brandon, L. V.** Hydrogeologic programme of the Geological Survey of Canada: *Ground Water*, v. 1, no. 2, p. 20-21, 33, Apr. 1963.
- 0268 **Brandt, H. L.; Johnson, B. M.** Forces in a moving bed of particulate solids with interstitial fluid flow: *Am. Inst. Chemical Eng. Jour.*, v. 9, no. 6, p. 771-777, Nov. 1963.
- Brant, R. A.** *See* Hanna, G. P., Jr. 1271
- Brater, E. F.** *See* King, H. W. 0369
- 0269 **Bredehoeft, J. D.** Hydrogeology of the lower Humboldt River basin, Nevada: *Nevada Dept. Conserv. and Nat. Resources Water Resources Bull.* 21, 50 p., June 1963. (Also pub. as *Nevada Univ. Desert Research Inst. Tech. Rept.* 3, 50 p., June 1963).
- 0270 **Bredehoeft, J. D.** (and others) Possible mechanisms for the concentration of brines in subsurface formations: *Am. Assoc. Petroleum Geologists Bull.*, v. 47, no. 2, p. 257-269, Feb. 1963.
- 1340 **Breidenbach, A. W.; Lichtenberg, J. J.** DDT and dieldrin in rivers—A report of the National Water Quality Network: *Science*, v. 141, no. 3584, p. 899-901, Sept. 1963.

- 0271 **Brennan, Robert.** Reconnaissance study of the chemical quality of surface waters in the Sacramento River basin, California: U.S. Geol. Survey Water-Supply Paper 1619-Q, p. Q1-Q44, June 1963.
- 0272 **Breusse, J. J.** Modern geophysical methods for subsurface water exploration: Geophysics, v. 28, no. 4, p. 633-657, Aug. 1963.
- 0273 **Brice, D. B.** Saline water conversion activities in California: California Dept. Water Resources Bull. 134-62, 60 p.. App. A-C, Aug. 1963.
- 0274 **Brice, H. D.** Tipping-bucket rain-gage attachment for a water-stage recorder, *in* Mesnier, G. N., and Iseri, K. T., compilers, Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, p. Z53-Z57, Nov. 1963.
- 0275 **Brindley, G. W.; Bender, Robert; Ray, Satyabrata.** Sorption of non-ionic aliphatic molecules from aqueous solutions on clay minerals. Clay-organic studies--VII: Geochim. et Cosmochim. Acta, v. 27, no. 11, p. 1129-1137, Nov. 1963.
- 1312 **British Columbia Nat. Resources Conf.** River basin development: British Columbia Nat. Resources Conf., 14th, Kelowna, B. C., 1962, Trans., 162 p., 1963.
- 0276 **Broeker, M. E.; Winslow, J. D.** Ground-water levels in observation wells in Kansas, 1962: Kansas Geol. Survey Bull. 167, 89 p.. Dec. 1963.
- Broeker, W. S.** *See* Rocco, G. G. 0731
- Brookhart, J. W.** *See* Andreasen, G. E. 0044
- Broom, H. C.** *See* Mundorff, M. J. 0433
- Broom, H. C.** *See* Thomas, C. A. 0981
- 0277 **Broom, M. E.; Irwin, J. H.** Records, logs, and water-level measurements of selected wells and test holes, and chemical analyses of ground water in Bent County, Colorado: Colorado Water Conserv. Board Basic-Data Rept. 14, 40 p., 1963.
- 0278 **Brown, C. B.** Role of small watersheds in river basin planning: Jour. Soil and Water Conserv., v. 18, no. 1, p. 14-18, Jan.-Feb. 1963.
- 0926 **Brown, D. J.** Piezometric head distribution in sand-filled wells: Jour. Hydrology [Amsterdam], v. 1, no. 3, p. 195-203, 1963.
- 1375 **Brown, I. C.** Chemical methods as an aid to hydrogeology. *in* Canada National Research Council, Groundwater. Proceedings of Hydrology Symposium No. 3, Calgary, Alberta, 1962; Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 181-206, 1963.
- 0279 **Brown, O. G.; Marris, A. W.** Turbulent flow of water in plane curved channels of finite depth: Am. Soc. Mech. Engineers Trans., Ser. D, Jour. Basic Eng., v. 85, no. 3, p. 377-391, Sept. 1963.
- 0280 **Brown, R. F.; Lambert, T. W.** Reconnaissance of ground-water resources in the Mississippian Plateau region, Kentucky: U.S. Geol. Survey Water-Supply Paper 1603, 58 p., June 1963.
- 0281 **Brown, R. F.; Lambert, T. W.** Availability of ground water in Brekinridge, Grayson, Hardin, Larue, and Mead Counties, Kentucky: U.S. Geol. Survey Hydrol. Inv. Atlas HA-33, three sheets, Mar. 1963.
- Brown, R. F.** *See* Lambert, T. W. 0285
- Brown, R. F.** *See* Lambert, T. W. 0286

- 0282 **Brown, R. H.** Drawdowns resulting from cyclic intervals of discharge, *in* Bentall, Ray, compiler, Methods of determining permeability, transmissibility and drawdown: U.S. Geol. Survey Water-Supply Paper 1536-I, p. 324-330, Dec. 1963.
- Brown, R. H.** *See* Skibitzke, H. E. 0622
- Brown, R. H.** *See* Theis, C. V. 0977
- Brown, R. H.** *See* Theis, C. V. 0980
- 1450 **Brown, R. H.** The cone of depression and the area of diversion around a discharging well in an infinite strip aquifer subject to uniform recharge, *in* Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C69-C85, 1963.
- 1451 **Brown, R. H.** Ground-water movement in a rectangular aquifer bounded by four canals, *in* Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C86-C100, 1963.
- 0002 **Brown, S. G.; Newcomb, R. C.** Ground-water resources of the coastal sand-dune area north of Coos Bay, Oregon: U.S. Geol. Survey Water-Supply Paper 1619-D, p. D1-D32, Jan. 1963.
- 0003 **Brown, S. G.** Problems of utilizing ground water in the west-side business district of Portland, Oregon: U.S. Geol. Survey Water-Supply Paper 1619-O, p. 01-042, Feb., 1963.
- 1478 **Brown, S. G.; Schumann, H. H.; Kister, L. R.; Johnson, P. W.** Basic ground-water data of the Willcox Basin, Graham and Cochise Counties, Arizona: Arizona State Land Dept. Water Resources Rept. 14, 93 p., July 1963.
- 0001 **Brown, Slater.** Water and thirst, chapter 4 of *World of the desert*: Indianapolis, Bobbs-Merrill Co., p. 65-84, 1963.
- 0005 **Bruce, R. L.** Water supply for the city of Vermillion: South Dakota Geol. Survey Spec. Rept. 21, 30 p., 1963.
- 0006 **Bruce, R. R.; Klute, A.** Measurements of soil moisture diffusivity from tension plate outflow data: Soil Sci. Soc. America Proc., v. 27, no. 1, p. 18-21, Jan.-Feb. 1963.
- 0007 **Brutsaert, Wilfried.** On pore size distribution and relative permeabilities of porous media: Jour. Geophys. Research, v. 68, no. 8, p. 2233-2235, Apr. 15 1963.
- 1267 **Bruun, Per.** Tracing of sediments in coastal waters by fluorescent materials, *in* Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112, (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 278-294, 1963.
- 0008 **Bue, C. D.** Principal lakes of the United States: U.S. Geol. Survey Circ. 476, 22 p., June 1963.
- 1479 **Bull, W. B.** Alluvial-fan deposits in western Fresno County, California: Jour. Geology, v. 71, no. 2, p. 243-251, Mar. 1963.
- Bunger, W. C.** *See* Miller, D. E. 0664
- 0010 **Buras, Nathan.** Conjunctive operation of dams and aquifers: Am. Soc. Civil Engineers Proc. Paper 3697, Hydraulics Div. Jour., v. 89, no. HY6, p. 111-131, Nov. 1963.
- Burchinal, J. C.** *See* Tsai, J. Cha-Hong. 1059
- 0011 **Burdon, D. J.; Safadi, Chafic.** Ras-El-Ain—The great karst springs of Mesopotamia: Jour. Hydrology [Amsterdam], v. 1, no. 1, p. 58-95, 1963.

- 1410 **Burdon, D. J.** (and others) The use of tritium in tracing karst ground water in Greece, *in* Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, p. 309-320, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- Burford, M. G.** *See* Masselli, J. W. 0531
- Burke, C. W., Jr.** *See* Tsivoglou, E. C. 1047
- 1339 **Burnett, J. L.** Fracture traces in the Tuscan formation, Northern California, *in* Short contributions to California Geology: California Div. Mines and Geology Spec. Rept. 82, p. 33-40, 1963.
- 0013 **Burnham, W. L.; Kunkel, Fred; Hofman, Walter; Peterson, W. C.** Hydrogeologic reconnaissance of San Nicolas Island, California: U.S. Geol. Survey Water-Supply Paper 1539-0, p. 01-043, Feb. 1963.
- 1480 **Burnham, W. L.** Reverse-circulation drilling: Am. Soc. Testing and Materials Spec. Tech. Pub. 351, p. 133-136, 1963.
- 0014 **Burnitt, S. C.** Reconnaissance of soil damage and ground-water quality, Fisher County, Texas: Texas Water Comm. Memo. Rept. 63-02, 49 p., 1963.
- Burt, M. C.** *See* Demmitt, T. F. 1353
- 0015 **Busby, M. W.** Yearly variations in runoff for the conterminous United States, 1931-60: U.S. Geol. Survey Water-Supply Paper 1669-S, p. S1-S49, Dec. 1963.
- 0016 **Bushman, F. X.** Ground water in the Socorro Valley, *in* Guidebook of the Socorro region, New Mexico Geol. Soc., 14th Field Conf., 1963: Socorro, New Mexico Bur. Mines and Mineral Resources, p. 155-159, 1963.
- Bushman, F. X.** *See* Hall, F. R. 0799
- 1314 **Byerly, J. R.** The relationship between watershed geology and beach radioactivity: U.S. Army, Corps of Engineers, Beach Erosion Board Tech. Memo. 135, 32 p., Aug. 1963.
- 0017 **Cagle, J. W., Jr.; Newton, J. C.** Geology and ground-water resources of Escambia County, Alabama: Alabama Geol. Survey Bull. 74, 205, p., Sept. 1963.
- Cagle, J. W., Jr.** *See* Clark, W. E. 0226
- Cahal, D. I.** *See* Davidian, Jacob. 0159
- Cahal, D. I.** *See* Davidian, Jacob. 0160
- 0018 **Cahoon, G. A.** (and others) Water-penetration profiles in a furrow-irrigated Washington navel orange orchard as affected by nitrogen sources and cultural treatments: Soil Sci., v. 95, no. 6, p. 400-406, June 1963.
- 0019 **Caisley, B.; Lister, H.; Molyneux, L.** Measurement of profiles of wind speed, temperature and vapour pressure near to the ground: Internat. Assoc. Sci. Hydrology Pub. 61, p. 37-48, 1963.
- 0020 **Calabresa, T. A.** Statutes and regulations governing private water well construction and pump installations: Ground Water, v. 1, no. 2, p. 25-32, Apr. 1963.
- 0021 **Caldwell, R. L.** (and others) Gamma-ray spectroscopy in well logging: Geophysics, v. 28, no. 4, p. 617-632, Aug. 1963.
- 0022 **California Bur. of Radiological Health.** Radioactivity in California surface water, 1961-June 1962: Radiolog. Health Data, v. 4, no. 4, p. 202-204, Apr. 1963.

- 0023 **California Bur. of Radiological Health.** Radioactivity in California surface water, July-December 1962: *Radiolog. Health Data*, v. 4, no. 9, p. 471-473, Sept. 1963.
- 0025 **California Dept. of Water Resources.** Ground water conditions in central and northern California, 1959-60: *California Dept. Water Resources Bull.* 77-60, 34 p., App. 143 p., Jan. 1963.
- 0026 **California Dept. of Water Resources.** Quality of surface waters in California, 1960-61. Part 2. Appendixes [Procedures, criteria, and basic data] of Volume I, Northern and central California: *California Dept. Water Resources Bull.* 65-61, v. 1, pt. 2, 477 p., Aug. 1963.
- 0027 **California Dept. of Water Resources.** Surface-water flow for 1961: *California Dept. Water Resources Bull.* 23-61, 307 p., Aug. 1963.
- 0028 **California Dept. of Water Resources.** Northeastern counties ground water investigations: *California Dept. Water Resources Bull.* 98, v. 2, 1963.
- 0512 **California Dept. of Water Resources.** South Bay ground water basins investigation, first progress report: Sacramento, California Dept. Water Resources, 21 p., App. 9 p., July 1963.
- 0029 **Callahan, J. A.** Ground-water resources in Yazoo County, Mississippi: *Mississippi Board Water Commissioners Bull.* 63-5, 42 p., May 1963.
- 0030 **Callahan, J. A.; Skelton, John; Everett, D. E.; Harvey, E. J.** Water resources of Adams, Claiborne, Jefferson, and Warren Counties, Mississippi: *Mississippi Indus. and Tech. Research Comm., Water Research Bull.* 63-1, 48 p., 1963.
- 0031 **Callahan, J. T.; Wait, R. L.; McCollum, M. J.** Television—A new tool for the ground-water geologist: *Ground Water*, v. 1, no. 4, p. 4-6, Oct. 1963.
- 0032 **Callahan, J. T.; Blanchard, H. E., Jr.** The equality of ground water, and its problems, in the crystalline rocks of Georgia: *Georgia Mineral Newsletter*, v. 16, nos. 3-4, p. 66-68, Fall-Winter, 1963.
- 0033 **Canada National Research Council.** Hydrology [Canadian activities in 1963]: *Canadian Geophys. Bull.*, v. 16, p. 44-56, 1963.
- 1491 **Canada National Research Council.** (Subcommittee on Hydrology) Groundwater. Proceedings of Hydrology Symposium No. 3, Calgary, Alberta, Nov. 8-9, 1962: Ottawa, Canada Dept. Northern Affairs and Natl. Resources, 394 p., 1963.
- 1493 **Canada National Research Council.** Selected bibliography on hydrology for the years 1959-1961, annotated, Canada: Ottawa, Canada Natl. Research Council and Canada Water Resources Branch, 72 p., 1963.
- 0034 **Cardwell, G. T.; Rollo, J. R.; Long, R. A.** Basic ground-water data for the Mississippi River parishes south of Baton Rouge, Louisiana: Baton Rouge, Louisiana Dept. Public Works, 12 p., June, 1963.
- 0035 **Cardwell, W. D. E.; Jenkins, E. D.** Ground-water geology and pump irrigation in Frenchman Creek Basin above Palisade, Nebraska, *with a section on* The chemical quality of the water, by Eugene R. Jochens and Robert A. Krieger: U.S. Geol. Survey Water-Supply Paper 1577, 472 p., July 1963.
- 0036 **Carey, W. C.** The mechanisms of turns in alluvial streams: *Mil. Engineer*, v. 55, no. 363, p. 14-16, Jan.-Feb. 1963.
- 0037 **Carlston, C. W.** Drainage density and streamflow: U.S. Geol. Survey Prof. Paper 422-C, p. C1-C8, Sept. 1963.
- 0038 **Carlston, C. W.** An early American statement of the Badon Ghyben-Herzberg principle of static fresh-water-salt-water balance: *Am. Jour. Sci.* v. 261, no. 1, p. 88-91, Jan. 1963.

- 0039 **Carpenter, C. H.; Young, R. A.** Ground-water data, central Sevier Valley, parts of Sanpete, Sevier, and Piute Counties, Utah: Utah State Engineer Basic-Data Rept. 3, 34 p., 1963.
- 0243 **Carreker, J. R.** The relation of solar radiation to evapotranspiration from cotton: *Jour. Geophys. Research*, v. 68, no. 16, p. 4731-4741, Aug. 15, 1963.
- Carroon, L. E.** *See* Powell, W. J. 1471
- 0244 **Carson, J. E.** Analysis of soil and air temperatures by Fourier techniques: *Jour. Geophys. Research*, v. 68, no. 8, p. 2217-2232, Apr. 15, 1963.
- 1492 **Carswell, L. D.; Bennett, G. D.** Geology and hydrology of the Neshannock quadrangle, Mercer and Lawrence Counties, Pennsylvania: Pennsylvania Geol. Survey, 4th Ser., Ground Water Rept. W 15, 90 p., 1963.
- 0245 **Cartan, F. O.; Curtis, G. J.** Apparatus for the determination of particle density of porous solids: *Anal. Chemistry*, v. 35, no. 3, p. 423-424, Mar. 1963.
- 0246 **Carter, J. R.; Green, A. R.** Floods in Wyoming, magnitude and frequency: U.S. Geol. Survey Circ. 478, 27 p., 1963, [Jan. 1964].
- Carter, R. F.** *See* Thomson, M. T. 1050
- 0248 **Carter, R. W.** (and others) Automation of streamflow records: U.S. Geol. Survey Circ. 474, 18 p., 1963.
- 1500 **Carter, R. W.; Anderson, I. E.** Accuracy of current meter measurements: Am. Soc. Civil Engineers Proc. Paper 3572, Hydraulics Div. *Jour.*, v. 89, no. HY4, p. 105-115, July 1963.
- Casertano, Lorenzo.** *See* Segerstrom, Kenneth. 1385
- 0249 **Causey, L. V.** Geology and ground-water resources of St. Clair County, Alabama—A reconnaissance: *Alabama Geol. Survey Bull.* 73, 84 p., 1963.
- 0250 **Cederstrom, D. J.** Ground-water resources of the Fairbanks area, Alaska: U.S. Geol. Survey Water-Supply Paper 1590, 84 p., Apr. 1963.
- Chamberlain, A. R.** *See* Sayre, W. W. 0908
- Changnon, S. A., Jr.** *See* Huff, F. A. 0929
- 1035 **Changnon, S. A., Jr.** Precipitation in a 550-square mile area of southern Illinois: *Illinois State Acad. Sci. Trans.*, v. 56, no. 4, p. 165-187, Dec. 1963.
- 1036 **Changnon, S. A., Jr.** Illinois cooperative project in climatology, 4th progress report: *Illinois State Water Survey Circ.* 87, 8 p., 1963.
- Charlu, K. L. N.** *See* Mirajgaoker, A. G. 0645
- 0251 **Cheipil, W. S.; Siddoway, F. H.; Armbrust, D. V.** Climatic index of wind erosion conditions in the Great Plains: *Soil Sci. Soc. America Proc.*, v. 27, no. 4, p. 449-451, July-Aug. 1963.
- 0252 **Cherry, R. N.** Chemical quality of water of Alabama streams, 1960—A reconnaissance study: *Alabama Geol. Survey Inf. Ser.* 27, 95 p., 1963.
- 0253 **Chilingar, G. V.; Main, Richard; Sinnokrot, Ali.** Relationship between porosity, permeability, and surface areas of sediments: *Jour. Sed. Petrology*, v. 33, no. 3, p. 759-765, Sept. 1963.

- 0254 **Chilingar, G. V.; Rieke, H. H., III; Robertson, J. O., Jr.** Degree of hydration of clays: *Sedimentology*, v. 2, no. 4, p. 341-342, Dec. 1963.
- 0255 **Christensen, C. M.** Ground water supply for the city of Scotland: *South Dakota Geol. Survey Spec. Rept.* 20, 27 p., 1963.
- 0256 **Christensen, C. M.** Water supply for the city of Redfield: *South Dakota Geol. Survey Spec. Rept.* 24, 32 p., June 1963.
- 0257 **Christensen, Wilfred.** Legislation on water resources in Denmark: *New England Water Works Assoc. Jour.*, v. 77, no. 2, p. 99-105, June 1963.
- Christiansen, E. A.** *See* Greer, J. E. 0791
- 1332 **Christiansen, E. A.** Hydrogeology of surficial and bedrock valley aquifers in southern Saskatchewan, in *Canada National Research Council, Groundwater, Proceedings of Hydrology Symposium, No. 3, Calgary, Alberta, 1962*: Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 49-71, 1963.
- Christman, R. F.** *See* Black, A. P. 0127
- Christman, R. F.** *See* Black, A. P. 0128
- 1499 **Christopoulos, C.; Liakopoulos, A.** A method for frequency analysis of rainfall and runoff data: *Internat. Assoc. Sci. Hydrology Bull.*, v. 8, no. 4, p. 59-70, Dec. 1963.
- 0259 **Ciriacy-Wantrup, S. V.** Resource conservation, economics and policies, revised edition: Berkeley, California Univ. Agr. Expt. Sta., 395 p., 1963. [1st ed. published 1952]
- 1239 **Clanton, U. S.** Sorption and release of radionuclides by sediments, in Kornegay, B. H., and others, editors, *Transport of radionuclides in fresh water systems*: U.S. Atomic Energy Comm., Div. Tech. Inf. TID-7664, p. 113-125, July 1963.
- 0226 **Clark, W. E.; Musgrove, R. H.; Menke, C. G.; Cagle, J. W., Jr.** Hydrology of Brooklyn Lake near Keystone Heights, Florida: *Florida Geol. Survey Rept. Inv.* 33, 43 p., 1963.
- 0261 **Clark, W. E.** Evapotranspiration and the relation of ground water to surface water in the Pond Creek basin, Oklahoma: Art. 221 in *U.S. Geol. Survey Prof. Paper 450-E*, p. E142-E145, Mar. 1963.
- Clark, W. E.** *See* Smith, D. B. 1415
- 0227 **Clawson, Marion.** Land and water for recreation—Opportunities, problems, and policies: Chicago, Rand McNally and Co., 144 p., 1963.
- 1414 **Clayton, C. G.; Smith, D. B.** A comparison of radioisotope methods for river flow measurement, in *Radioisotopes in hydrology—Proceedings of the symposium on the application of radioisotopes in hydrology*, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, p. 1-24, 1963. [Available in the U.S. from International Publications, Inc., New York, N. Y.]
- 0228 **Cleary, E. J.** An electronic monitor system for river-quality surveillance and research: *Internat. Jour. Air and Water Pollution*, v. 7, nos. 4-5, p. 331-341, June 1963.
- 0229 **Cleary, E. J.; Horton, R. K.; Boes, R. J.** Reuse of Ohio River water: *Am. Water Works Assoc. Jour.*, v. 55, no. 6, p. 683-686, June 1963.

- 1318 **Clebsch, Alfred, Jr.; Peckham, A. E.** Research by the United States Geological Survey related to the movement of radionuclides in the earth materials: *La Retention et la Migration des Ions Radioactifs dans les Sols (Retention and migration of Radioactive Ions in Soils)*, Colloque Internat., France, 1962, Proc., p. 189-197, 1963.
- 0230 **Cliff, E. P.** Water for a nation's needs: *Jour. Soil and Water Conserv.*, v. 18, no. 5, p. 185-189, Sept.-Oct. 1963.
- 0231 **Cline, D. R.** Hydrology of upper Black Earth Creek basin, Wisconsin, *with a section on Surface water*, by Mark W. Busby: U.S. Geol. Survey Water-Supply Paper 1669-C, p. C1-C27, Nov. 1963.
- 0232 **Clyde, G. D.** The human element in resource management: *Jour. Soil and Water Conserv.*, v. 18, no. 5, p. 181-184, Sept.-Oct. 1963.
- 0233 **Clyma, Wayne.** Ground-water hydrology: *Agr. Eng.*, v. 44, no. 2, p. 82-83, Feb. 1963.
- Coffin, D. L. *See* Moulder, E. A. 0427
- Coffin, D. L. *See* McGovern, H. E. 0444
- 0234 **Cohen, J. M.** Taste and odor of ABS in water: *Am. Water Works Assoc. Jour.*, v. 55, no. 5, p. 587-591, May 1963.
- Cohen, L. H. *See* Saraf, D. N. 1469
- 0235 **Cohen, Philip.** Specific-yield and particle-size relations of Quaternary alluvium, Humboldt River valley, Nevada: U.S. Geol. Survey Water-Supply Paper 1669-M, p. M1-M24, July 1963.
- 0236 **Cohen, Philip; Everett, D. E.** A brief appraisal of the ground-water hydrology of the Dixie-Fairview Valley area, Nevada: Nevada Dept. Conserv. and Nat. Resources Ground-Water Resources—Reconn. Ser. Rept. 23, 40 p., Nov. 1963.
- 1346 **Cohen, Philip.** An evaluation of the water resources of the Humboldt River valley near Winnemucca, Nevada, *with sections by R. C. Hanson, T. W. Robinson, and A. O. Waananen*: Nevada Dept. Conserv. and Nat. Resources, Water Resources Bull. 24, 104 p., 1963.
- 0237 **Colby, B. R.** Fluvial sediments—a summary of source, transportation, deposition, and measurement of sediment discharge: U.S. Geol. Survey Bull. 1181-A, p. A1-A47, Aug. 1963.
- 0238 **Colby, B. R.** Working graph for computing unmeasured sediment discharge, *in* Mesnier, G. N., and Iseri, K. T., compilers, Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, Z49-Z52, Nov. 1963.
- 0239 **Colby, B. R.** Nomograph for computing effective shear on streambed sediment: Art. 112 in U.S. Geol. Survey Prof. Paper 475-C, p. C202-C205, Nov. 1963.
- 0240 **Cole, J. A.; Green, M. J.** Measurements of net radiation over vegetation and of other climatic factors affecting transpiration losses in water catchments: Internat. Assoc. Sci. Hydrology Pub. 62, p. 190-202, 1963.
- 0241 **Collier, C. R.** Sediment characteristics of small streams in southern Wisconsin, 1954-59: U.S. Geol. Survey Water-Supply Paper 1669-B, p. B1-B34, Apr. 1963.
- 0242 **Collins, A. G.** Flame spectrophotometric determination of cesium and rubidium in oil field waters: *Anal. Chemistry*, v. 35, no. 9, p. 1258-1261, Aug. 1963.
- 0397 **Collins, J. I.** Inception of turbulence at the bed under periodic gravity waves: *Jour. Geophys. Research*, v. 68, no. 21, p. 6007-6014, Nov. 1, 1963.

- 1344 **Colorado River Water Users Assoc.** Proceedings, 20th annual meeting, Las Vegas, Nevada, Dec. 5-6, 1963; Las Vegas, Nev., Colorado River Comm., 43 p., 1963. [Individual papers not cited.]
- 1342 **Colorado School of Mines.** Symposium on Exploration Drilling, 11th, Golden, Colorado, 1963. Papers and discussions: Colorado School Mines Quart., v. 58, no. 4, 273 p., Oct. 1963.
- 1315 **Colorado State University.** Research reports, papers, bulletins and theses, 1948-1963: Fort Collins, Colorado State University, Sections A-I, various pagination, Dec. 1963.
- 1501 **Columbia Basin Inter-Agency Comm.** Implementation of Pacific Northwest Hydrologic Data Collection Program: Portland, Oreg., Columbia Basin Inter-Agency Committee, Hydrology Subcommittee, 11 p., Jan. 1963.
- 0967 **Columbia Basin Water Forecast Comm.** Proceedings, 26th annual meeting, Portland, Oregon, April 15, 1963; Portland, Ore., U.S. Soil Conserv. Service, Water Supply Precasting Unit, 34 p., July 1963.
- Colwell, R. E.** See VanWazer, J. R. 1113
- 0398 **Conover, C. S.; Reeder, H. O.** Special drawdown scales for predicting water-level changes throughout heavily pumped areas, in Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C38-C44, 1963.
- 0399 **Conover, C. S.** Ground-water reservoirs, in Thomas, H. E., and others, Effects of drought in the Rio Grande Basin: U.S. Geol. Survey Prof. Paper 372-D, p. D14-D16, Mar. 1963.
- 0400 **Conover, C. S.; Theis, C. V.; Griggs, R. L.** Geology and hydrology of Valle Grande and Valle Toledo, Sandoval County, New Mexico: U.S. Geol. Survey Water-Supply Paper 1619-Y, p. Y1-Y37, Sept. 1963.
- Conover, C. S.** See Theis, C. V. 0975
- 0401 **Conover, W. J.; Benson, M. A.** Long-term flood frequencies based on extremes of short-term records: Art. 228 in U.S. Geol. Survey Prof. Paper 450-E, p. E159-E160, Mar. 1963.
- Cooley, M. E.** See Davis, G. E. 0165
- 0402 **Cooper, A. J.** (and others) Western North Carolina watershed research project objectives and procedures: North Carolina State College, Soil Sci. Dept., Soils Inf. Ser. 4, 32 p., Jan. 1963.
- 0403 **Cooper, H. H., Jr.** Type curves for nonsteady radial flow in an infinite leaky artesian aquifer, in Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C48-C55, 1963.
- 0404 **Cooper, H. H., Jr.; Rorabaugh, M. I.** Changes in ground-water movement and bank storage caused by flood waves in surface streams: Art. 53 in U.S. Geol. Survey Prof. Paper 475-B, p. B192-B195, June 1963.
- 0513 **Cooper, H. H., Jr.; Rorabaugh, M. I.** Ground-water movements and bank storage due to flood stages in surface streams: U.S. Geol. Survey Water-Supply Paper 1536-J, p. 343-366, Oct. 1963.
- 0405 **Cooper, J. B.** Ground water in Cenozoic fill in collapse structures, southeastern Eddy County, New Mexico: Art. 225 in U.S. Geol. Survey Prof. Paper 450-E, p. E152-E153, Mar. 1963.
- Copeland, B. J.** See Dorris, T. C. 0186

- 0406 **Cordova, R. M.** Reconnaissance of the ground-water resources of the Arkansas Valley region, Arkansas: U.S. Geol. Survey Water-Supply Paper 1669-BB, p. BB1-BB33, Dec. 1963.
- 0407 **Corey, J. C.; Nielsen, D. R.; Biggar, J. W.** Miscible displacement in saturated and unsaturated sandstone: Soil Sci. Soc. America Proc., v. 27, no. 3, p. 258-262, May-June 1963.
- Corley, J. P.** *See* Kramer, H. A. 1243
- 0408 **Counts, H. B.; Donsky, Ellis.** Salt-water encroachment, geology, and ground water resources of Savannah area, Georgia and South Carolina: U.S. Geol. Survey Water-Supply Paper 1611, 100 p., 1963, [Jan. 1964].
- Counts, H. B.** *See* Davis, G. H. 1466
- 0409 **Court, Arnold.** Snow cover relations in the Kings River basin, California: Jour. Geophys. Research, v. 68, no. 16, p. 4751-4761, Aug. 15, 1963.
- 0140 **Covey, Winton.** Mathematical study of the first stage of drying of a moist soil: Soil Sci. Soc. America Proc., v. 27, no. 2, p. 130-134, Mar.-Apr. 1963.
- Cox, W. S.** *See* Teasley, J. I. 1029
- 0141 **Craig, F. C.** Variation in velocity distribution in a tide-affected stream, in Mesnier, G. N., and Iseri, K. T., compilers, Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, p. Z17-Z24, Nov. 1963.
- 0142 **Crandell, H. C.** Geology and ground-water resources of the Town of Southold, Suffolk County, New York: U.S. Geol. Survey Water-Supply Paper 1619-GG, p. GG1-GG36, Dec. 1963.
- 1504 **Crane, D. A.** Coastal flooding in Barnstable County, Cape Cod, Massachusetts: Boston, Massachusetts Water Resources Comm., 63 p., Mar. 1963.
- 0144 **Crane, F. E.; Kendall, H. A.; Gardner, G. H. F.** Some experiments on the flow of miscible fluids of unequal density through porous media: Soc. Petroleum Engineers Jour., v. 3, no. 4, p. 277-280, Dec. 1963.
- 0145 **Crawford, N. H.; Linsley, R. K.** Estimate of the hydrologic results of rainfall augmentation: Jour. Appl. Meteorology, v. 2, no. 3, p. 426-427, June 1963.
- 0146 **Creager, J. S.** Sedimentation in a high energy, embayed, continental shelf environment: Jour. Sed. Petrology, v. 33, no. 4, p. 815-830, Dec. 1963.
- Creager, J. S.** *See* Gross, M. G. 1323
- 0147 **Cressler, C. W.** Geology and ground-water resources of Catoosa County, Georgia: Georgia Geol. Survey Inf. Circ. 28, 19 p., 1963.
- Crickmore, M. J.** *See* Lean, G. H. 1417
- Criddle, W. D.** *See* Blaney, H. F. 0131
- Criner, J. H.** *See* Sun, P-C. P. 1015
- 0148 **Croft, M. G.** Geology and ground-water resources of Bartow County, Georgia: U.S. Geol. Survey Water-Supply Paper 1619-FF, p. FF1-FF32, Oct. 1963.
- 0150 **Cronin, J. G.; Follett, C. R.; Shafer, G. H.; Rettman, P. L.** Reconnaissance investigation of the ground-water resources of the Brazos River basin, Texas: Texas Water Comm. Bull. 6310, 152 p., Dec. 1963.

- 1488 **Cronin, J. G.; Wells, L. C.** Geology and ground-water resources of Hale County, Texas: U.S. Geol. Survey Water-Supply Paper 1539-U, p. U1-U38, Feb. 1963.
- Cronk, Casper.** *See* Goldthwait, R. P. 0784
- Crooks, J. W.** *See* Kenner, W. E. 0366
- 0151 **Cross, W. P.** Low-flow frequencies and storage requirements for selected Ohio streams: Ohio Div. Water Bull. 37, 66 p., 1963.
- Cross, W. P.** *See* Edelen, G. W., Jr. 0206
- Cross, W. P.** *See* Edelen, G. W., Jr. 0207
- 1328 **Crosthwaite, E. G.** Hydrogeology and its application to engineering problems, *in* Engineering geology symposium, 1st, ann., Pocatello, Idaho, 1963, Proc.: Pocatello, Idaho State Univ., p. 11-16, 1963.
- 1427 **Crosthwaite, E. G.** Ground-water appraisal of Antelope and Middle Reese River Valleys, Lander County, Nevada: Nevada Dept. Conserv. and Nat. Resources, Ground-Water Resources—Reconn. Ser. Rept. 19, 33 p., Sept. 1963.
- 0152 **Crow, F. R.** The effect of wind on evaporation suppressing films and methods of modification: Internat. Assoc. Sci. Hydrology, Pub. 62, p. 26-37, 1963.
- 0153 **Crummett, W. B.; Hummel, R. A.** The determination of traces of polyacrylamides in water: Am. Water Works Assoc. Jour., v. 55, no. 2, p. 209-219, Feb. 1963.
- Cruse, R. R.** *See* Koberg, G. E. 0384
- 0154 **Csallany, Sandor; Walton, W. C.** Yields of shallow dolomite wells in northern Illinois: Illinois State Water Survey Rept. Inv. 46, 43 p., 1963.
- Cummans, J. E.** *See* Thomas, C. A. 0981
- 0156 **Cummings, T. R.** Chemical character of surface waters of Oklahoma, 1957-1958: Oklahoma Water Resources Board Bull. 19, 165 p., 1963.
- Cummings, T. R.** *See* Robinove, C. J. 0729
- 0155 **Cummins, R. S.; Ingram, L. F.** Tracing sediment movement with radioisotopes: Mil. Engineer, v. 55, no. 365, p. 161-164, May-June 1963.
- Cunge, Jan.** *See* Baczek, Maria. 0085
- Curry, R. B.** *See* Rausch, D. L. 0709
- Curtis, G. J.** *See* Cartan, F. O. 0245
- 0157 **Cushing, E. M.** Water resources and the Mississippi embayment project: U.S. Geol. Survey Circ. 471, 8 p., Apr. 1963.
- 0158 **Cushman, R. L.; Halpenny, L. C.** Safford Valley, *in* Thomas, H. E., and others, Effects of drought in the Colorado River Basin: U.S. Geol. Survey Prof. Paper 372-F, p. F29-F32, Oct. 1963.
- Dalrymple, P. C.** *See* Lettau, H. H. 0488
- 0159 **Davidian, Jacob; Cahal, D. I.** Distribution of shear in rectangular channels: Art. 113 *in* U.S. Geol. Survey Prof. Paper 475-C, p. C206-C208, Nov. 1963.
- 0160 **Davidian, Jacob; Cahal, D. I.** Direct measurement of shear in open-channel flow: Art. 121 *in* U.S. Geol. Survey Prof. Paper 475-C, p. C228-C229, Nov. 1963.

**Davidson, J. H.** See Towne, W. W. 1265

- 0161 **Davidson, J. M.; Biggar, J. W.; Nielsen, D. R.** Gamma-radiation attenuation for measuring bulk density and transient water flow in porous materials: *Jour. Geophys. Research*, v. 68, no. 16, p. 4777-4783, Aug. 15, 1963.
- 0162 **Davis, D. A.; Yamanga, George.** Preliminary report on the water resources of Kahola Mountain and Mauna Kea, Hawaii: Hawaii Div. Water and Land Devel. Circ. C14, 44 p., Jan. 1963.
- 0163 **Davis, D. A.** Ground-water reconnaissance of American Samoa: U.S. Geol. Survey Water-Supply Paper 1608-C, p. C1-C21, Sept. 1963.
- 0164 **Davis, E. G., Jr.; Hawkins, M. F., Jr.** Linear fluid-barrier detection by well pressure measurements: *Jour. Petroleum Technology*, v. 15, no. 10, p. 1077-1079, Oct. 1963.
- 0165 **Davis, G. E.; Hardt, W. F.; Thompson, L. K.; Cooley, M. E.** Geohydrologic data in the Navajo and Hopi Indian Reservation, Arizona, New Mexico, and Utah. Part 1, Records of ground-water supplies: Arizona State Land Dept. Water Resources Rept. 12-A, 159 p., Apr. 1963.
- 0166 **Davis, G. H.** Southern San Joaquin Valley, *in* Thomas, H. E., and others. Effects of drought along Pacific Coast in California: U.S. Geol. Survey Prof. Paper 372-G, p. G20-G24, Nov. 1963.
- 0168 **Davis, G. H.** Formation of ridges through differential subsidence of peatlands of the Sacramento-San Joaquin Delta, California: Art. 101 *in* U.S. Geol. Survey Prof. Paper 475-C, p. C162-C165, Nov. 1963.
- 1466 **Davis, G. H.; Small, J. B.; Counts, H. B.** Land subsidence related to decline of artesian pressure in the Ocala Limestone at Savannah, Georgia: *Geol. Soc. America Eng. Geology Case Histories*, no. 4, p. 1-8, 1963.
- 0169 **Davis, J. R.** Relationship of can evaporation to pan evaporation and evapotranspiration: *Jour. Geophys. Research*, v. 68, no. 20, p. 5711-5718, Oct. 15, 1963.
- Davis, L. V.** See Tanaka, H. H. 1022
- 1351 **Davis, S. N.; Lynch, E. J.** Ground-water monitoring: Palo Alto, Calif., Hazleton-Nuclear Science Corp., 34 p., App., Dec. 1963.
- DeBow, Robert.** See Sceva, J. C. 0910
- 0170 **DeCook, K. J.** Geology and ground-water resources of Hays County, Texas: U.S. Geol. Survey Water-Supply Paper 1612, 72 p., June 1963.
- 1264 **Deery, H. A.** Lower Columbia River cooperative water quality survey and analysis, *in* Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112 (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 37-47, 1963.
- 0171 **DeHaven, J. C.** Water supply economics, technology, and policy: Am. Water Works Assoc. Jour., v. 55, no. 5, p. 539-547, May 1963.
- 0172 **DeLaguna, Wallace.** Geology of Brookhaven National Laboratory and vicinity, Suffolk County, N. Y.: U.S. Geol. Survey Bull. 1156-A, p. A1-A35, July 1963.
- 1363 **Delay, W. H.; Seaders, John.** Temperature studies on the Umpqua River, Oregon, *in* Water temperature—Influences, effects, and control: U.S. Public Health Service Pacific NW Water Lab., Pacific NW Symposium on Water Pollution Research, 12th, Corvallis, Oreg., 1963, Proc., p. 57-75, Nov. 1963.

- Delleur, J. W.** *See* Lembke, W. D. 0484
- DeLuca, F. A.** *See* Perlmutter, N. M. 0600
- Demirel, Turgut.** *See* Roderick, G. L. 0732
- 1353 **Demmitt, T. F.; Burt, M. C.** Continuous measurement of trace concentrations of hardness in water: U.S. Atomic Energy Comm. Research and Devel. Rept. HW-77538, 13 p., May 1963. [Available from U.S. Dept. Commerce, Office of Tech. Services.]
- Dempster, G. R., Jr.** *See* Nordin, C. F., Jr. 0561
- Dendy, F. E.** *See* Asmussen, L. E. 0065
- 0173 **Dennis, A. S.; Fernald, F. G.** Frequency distributions of shower sizes: *Jour. Appl. Meteorology*, v. 2, no. 3, p. 767-769, Dec. 1963.
- Dennis, P. E.** *See* Thomsen, B. W. 1400
- DeRidder, N. A.** *See* Dieleman, P. J. 1405
- 0174 **Deutsch, Morris.** Ground-water contamination and legal controls in Michigan: U.S. Geol. Survey Water-Supply Paper 1691, 79 p., Feb. 1963.
- 0175 **DeWiest, R. J. M.** Russian contributions to the theory of ground-water flow: *Ground Water*, v. 1, no. 1, p. 44-48, Jan. 1963.
- 0176 **DeWiest, R. J. M.** Replenishment of aquifers intersected by streams: Am. Soc. Civil Engineers Proc. Paper 3706, Hydraulics Div. Jour., v. 89, no. HY6, p. 165-191, Nov. 1963.
- 0177 **DeWiest, R. J. M.** Flow to an eccentric well in a leaky circular aquifer with varied lateral replenishment: *Geofisica Pura e Applicata* [Pure and Applied Geophysics], v. 54 (1963/I), p. 87-102, Jan.-Apr. 1963.
- 0178 **Diaz, A. M.** Dissolved-salt contribution to Great Salt Lake, Utah: Art. 230 in U.S. Geol. Survey Prof. Paper 450-E, p. E163-E165, Mar. 1963.
- 1405 **Dieleman, P. J.; DeRidder, N. A.** Studies of salt and water movement in the Bol Guini polder, Chad Republic: *Jour. Hydrology* [Amsterdam], v. 1, no. 4, p. 311-343, 1963.
- Dillard, J. W.** *See* Baker, B. B. 0087
- Dillard, J. W.** *See* Baker, B. B. 0088
- 0179 **Dillard, J. W.** Availability and quality of ground water in Smith County, Texas: Texas Water Comm. Bull. 6302, p. A1-A27, B1-B20, C1-C68, May 1963.
- Dillard, J. W.** *See* Peckham, R. C. 0596
- 0180 **Dinwiddie, G. A.** Municipal water supplies and uses, southeastern New Mexico: New Mexico State Engineer Tech. Rept. 29A, 140 p., 1963.
- 0181 **Diskin, M. H.** Temporary flow measurement in sewers and drains: Am. Soc. Civil Engineers Proc. Paper 3574, Hydraulics Div. Jour., v. 89, no. HY4, p. 141-159, July 1963.
- 0182 **Doering, E. J.** A direct method for measuring the upward flow of water from the water table: *Soil Sci.*, v. 96, no. 3, p. 191-195, Sept. 1963.
- 1297 **Doll, H. G.; Tixier, M. P.; Segesman, F.** Recent developments in well logging in the U.S.A., in *Drilling and production*: World Petroleum Cong., 6th, Frankfort-on-Main, 1963, Proc., Sec. II, p. 233-251, 1963.

- 0183 **Doll, W. L.; Meyer, Gerald; Archer, R. J.** Water resources of West Virginia: Charleston, West Virginia Div. Water Resources, 134 p., 1963.
- 0184 **Dominy, F. E.** Federal and State cooperation in the development of the water resources of California: Am. Water Works Assoc. Jour., v. 55, no. 4, p. 461-466, Apr. 1963.
- 0185 **Donsky, Ellis.** Records of wells and ground-water quality in Camden County, New Jersey, with special reference to public water supplies: New Jersey Div. Water Policy and Supply, Water Resources Circ. 10, 70 p., 1963.
- Donsky, Ellis.** *See* Counts, H. B. 0408
- 0186 **Dorris, T. C.; Copeland, B. J.; Lauer, G. J.** Limnology of the middle Mississippi River. IV. Physical and chemical limnology of river and chute: Limnology and Oceanography, v. 8, no. 1, p. 79-88, Jan. 1963.
- Dougherty, J. D.** *See* Morris, R. L. 0422
- Drake, J. A.** *See* Maeovsky, Anthony. 0517
- 0187 **Drake, P. G.** Field filtering unit for water samples, *in* Mesnier, G. N., and Iseri, K. T., compilers. Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, p. Z29-Z32, Nov. 1963.
- Drause, F. P.** *See* Jackson, F. L. 0319
- 0188 **Dreibelbis, F. R.** Land use and soil type effects on the soil moisture regime in lysimeters and small watersheds: Soil Sci. Soc. America Proc., v. 27, no. 4, p. 455-460, July-Aug. 1963.
- Drescher, W. J.** *See* Knowles, D. B. 0383
- Drescher, W. J.** *See* Walton, W. C. 1149
- 0189 **DuByne, E. T.** Taste and odor problems of a Maumee River supply: Am. Water Works Assoc. Jour., v. 55, no. 6, p. 710-714, June 1963.
- 0190 **Ducret, G. L., Jr.; Anderson, D. B.** Records of wells, water levels and chemical quality of water in Baker Valley, Baker County, Oregon: Oregon State Engineer Ground-Water Rept. 6, 34 p., Mar. 1963.
- 0191 **Dugan, P. R.; Pfister, R. M.; Sprague, M. L.** Evaluation of the extent and nature of pesticide and detergent involvement in surface waters of a selected watershed: New York State Dept. Health Research Rept. 10, pt. 1, 74 p., 1963.
- 1244 **Duncan, D. L.; Warnick, C. C.** Instrumentation for hydrologic measurements at the University of Idaho, *in* Western Snow Conference, 31st ann. mtg., Yosemite Natl. Park, Calif., 1963, Proc.: Tacoma, Wash., p. 67-73, 1963.
- 0192 **Dunn, D. F.; Larson, T. E.** Relationship of domestic water use to assessed valuation, with selected demographic and socio-economic variables: Am. Water Works Assoc. Jour., v. 55, no. 4, p. 441-450, Apr. 1963.
- 0193 **Dunning, H. N.** Geochemistry of organic pigments, Chapter 9 *in* Breger, I. A., ed., Organic Geochemistry: New York, Macmillan, p. 367-430, 1963.
- 0194 **Dupont, K. C.; Rosen, P.** Solution of the Stokes' flow of a sphere by minimization of the dissipation of energy: Am. Jour. Physics, v. 31, no. 4, p. 294-296, Apr. 1963.
- 0195 **Durfor, C. N.** Water requirements of the styrene, butadiene and synthetic-rubber industries: U.S. Geol. Survey Water-Supply Paper 1330-F, p. 221-285, June 1963.

- 0196 **Durfor, C. N.; Anderson, P. W.** Chemical quality of surface waters in Pennsylvania: U.S. Geol. Survey Water-Supply Paper 1619-W, p. W1-W50, Mar., 1963.
- 0197 **Durum, W. H.; Hem, J. D.** Geochemistry of water, in United States National report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 579-581, June 1963.
- 0198 **Durum, W. H.; Haffty, Joseph.** Implications of the minor element content of some major streams of the world: Geochim. et Cosmochim. Acta, v. 27, no. 1, p. 1-11, Jan. 1963.
- 0199 **Dutcher, L. C.; Garrett, A. A.** Geologic and hydrologic features of the San Bernardino area, California, with special reference to underflow across the San Jacinto fault: U.S. Geol. Survey Water-Supply Paper 1419, 114 p., 1963, [Apr. 1964].
- 0200 **Dutcher, L. C.; Bader, J. C.** Geology and hydrology of Agua Caliente Spring, Palm Springs, California: U.S. Geol. Survey Water-Supply Paper 1605, 43 p., Apr. 1963.
- 0202 **Dvoracek, M. J.; Scott, V. H.** Ground-water flow characteristics influenced by recharge pit geometry: Am. Soc. Agr. Engineers Trans. (Gen. Ed.), v. 6, no. 3, p. 262-265, Nov. 1963.
- 0201 **Dyer, H. B.** (and others) Wells and springs in the lower Mojave Valley area, San Bernardino County, California: California Dept. Water Resources Bull. 91-10, 173 p., Dec. 1963.
- 0203 **Eakin, T. E.** Ground-water appraisal of Dry Lake and Delamar Valleys, Lincoln County, Nevada: Nevada Dept. Conserv. and Nat. Resources, Ground-Water Resources—Reconn. Ser. Rept. 16, 26 p., May 1963.
- 0204 **Eakin, T. E.** Ground-water appraisal of Garden and Coal Valleys, Lincoln and Nye Counties, Nevada: Nevada Dept. Conserv. and Nat. Resources, Ground-Water Resources—Reconn. Ser. Rept. 18, 29 p., July 1963.
- 0205 **Eakin, T. E.** Ground-water appraisal of Pahranagat and Pahroc Valleys, Lincoln and Nye Counties, Nevada: Nevada Dept. Conserv. and Nat. Resources, Ground-Water Resources—Reconn. Ser. Rept. 21, 36 p., Oct. 1963.
- Eakin, T. E.** See Rush, F. E. 0900
- Eakin, T. E.** See Walker, G. E. 1127
- 1294 **Eaton, E. D.** Federal legislation in the water resource area: Texas A and M Univ., Water Resources Inst., Water for Texas Conf., 8th ann., College Station, Texas, 1963, Proc., p. 55-57, 1963.
- Eaton, J. R.** See MacRostie, Wayne. 0452
- 1274 **Eberly, W. R.** Oxygen production in some northern Indiana lakes, in Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112, (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 733-747, 1963.
- 0206 **Edelen, G. W., Jr.; Cross, W. P.; Somers, W. P.** Floods on Crab Creek at Youngstown, Ohio: U.S. Geol. Survey Hydrol. Inv. Atlas HA-56, one sheet, Feb. 1963.
- 0207 **Edelen, G. W., Jr.; Ruggles, F. H., Jr.; Cross, W. P.** Floods at Warren, Ohio: U.S. Geol. Survey Hydrol. Inv. Atlas HA-51, one sheet, Feb. 1963.

- 1459 **Edgar, W. F.** Radium content of drinking water in the central Savannah River area: U.S. Atomic Energy Comm. Research and Devel. Rept. DPSPU-63-30-10, 8 p., Apr. 1963. [Available from U.S. Dept. Commerce, Office of Tech. Services.]
- Ehhalt, D.** *See* Vogel, J. C. 0959
- Ehhalt, D.** *See* Vogel, J. C. 0974
- Ehlig, C. F.** *See* Gardner, W. R. 0768
- 0209 **Eklund, Henning.** Fresh water—Temperature of maximum density calculated from compressibility: *Science*, v. 142, no. 3598, p. 1457-1458, Dec. 13, 1963.
- 1360 **Eldridge, E. F.** (compiler) Water temperature—Influences, effects, and control: U.S. Public Health Service Pacific NW Water Lab., Pacific NW Symposium on Water Pollution Research, 12th, Corvallis, Oreg., Nov. 7, 1963, Proc., 160 p., Nov. 1963.
- 1404 **Elliott, R. D.; Walser, J. T.** Abrupt shifts in seasonal runoff relationships as related to cloud-seeding activity, in *Western Snow Conference*, 31st ann. mtg., Yosemite Natl. Park, Calif., 1963, Proc.: Tacoma, Wash., p. 99-108, 1963.
- 0210 **Ellis, D. W.; Allen, H. E.; Noehre, A. W.** Floods in Arlington Heights quadrangle, Illinois: U.S. Geol. Survey Hydrol. Inv. Atlas HA-67, one sheet, Apr. 1963.
- 0211 **Ellis, D. W.; Allen, H. E.; Noehre, A. W.** Floods in Elmhurst quadrangle, Illinois: U.S. Geol. Survey Hydrol. Inv. Atlas HA-68, one sheet, June 1963.
- 0212 **Ellis, D. W.** (and others) Floods at Wichita, Kansas: U.S. Geol. Survey Hydrol. Inv. Atlas HA-63, five sheets, July 1963.
- 0213 **Ellis, D. W.; Allen, H. E.; Noehre, A. W.** Floods in Wheeling quadrangle, Illinois: U.S. Geol. Survey Hydrol. Inv. Atlas HA-71, one sheet, Aug. 1963.
- 0214 **Ellis, D. W.; Allen, H. E.; Noehre, A. W.** Floods in Highland Park quadrangle, Illinois: U.S. Geol. Survey Hydrol. Inv. Atlas HA-69, one sheet, Aug. 1963.
- 0215 **Ellis, D. W.; Allen, H. E.; Noehre, A. W.** Floods in Aurora North quadrangle, Illinois: U.S. Geol. Survey Hydrol. Inv. Atlas HA-70, one sheet, Oct. 1963.
- 0217 **Ellis, H. H.** Water law in eastern United States: *Jour. Soil and Water Conserv.*, v. 18, no. 1, p. 19-27, Jan.-Feb. 1963.
- Ellison, B. E., Jr.** *See* Boswell, E. H. 0138
- 0218 **Ellison, B. E., Jr.; Boswell, E. H.** Water levels and artesian pressures in observation wells in Mississippi: *Mississippi Board Water Commissioners Bull.* 63-12, 36 p., Dec. 1963.
- 0219 **Emery, P. A.; Malhoit, M. M.** Water levels in observation wells in Nebraska, 1962: *Nebraska Univ. Conserv. and Survey Div. Water Survey Paper* 13, 163 p., Apr. 1963.
- Emmett, L. F.** *See* Bedinger, M. S. 1426
- Emmett, L. F.** *See* Bedinger, M. S. 1456
- 0220 **Emrich, G. H.; Lucas, H. F., Jr.** Geologic occurrence of natural radium in ground water in Illinois: *Internat. Assoc. Sci. Hydrology Bull.*, v. 8, no. 3, p. 5-19, Sept. 1963.
- 0221 **Engelhardt, W. V.; Gaida, K. H.** Concentration changes of pore solutions during the compaction of clay sediments: *Jour. Sed. Petrology*, v. 33, no. 4, p. 919-930, Dec. 1963.

- 0222 **Engler, Kyle; Bayley, F. H., III; Sniegocki, R. T.** Studies of artificial recharge in the Grand Prairie region, Arkansas, environment and history: U.S. Geol. Survey Water-Supply Paper 1615-A, p. A1-A32, Nov. 1963.
- Engler, Kyle.** *See* Sniegocki, R. T. 0862
- 0223 **Erdei, J. F.** Control of taste and odor in Missouri River water: Am. Water Works Assoc. Jour., v. 55, no. 12, p. 1506-1522, Dec. 1963.
- Eschner, A. R.** *See* Reinhart, K. G. 0930
- 0224 **Estoque, M. A.** A numerical model of the atmospheric boundary layer: Jour. Geophys. Research, v. 68, no. 4, p. 1103-1113, Feb. 15, 1963.
- Evans, N. A.** *See* Kemper, W. D. 0363
- 0225 **Evenson, R. E.; Miller, G. A.** Geology and ground-water features of Point Arguello Naval Missile Facility, Santa Barbara County, California: U.S. Geol. Survey Water-Supply Paper 1619-F, p. F1-F35, Mar. 1963.
- Everett, D. E.** *See* Callahan, J. A. 0030
- Everett, D. E.** *See* Cohen, Philip. 0236
- 1361 **Everts, C. M.** Temperature as a water quality parameter, *in* Water temperature—Influences, effects, and control: U.S. Public Health Service Pacific NW Water Lab., Pacific NW Symposium on Water Pollution Research, 12th, Corvallis, Oreg., 1963, Proc., p. 2-5, Nov. 1963.
- 1240 **Ewing, B. B.; Banerji, S. K.** Effect of biological slime on the retention of alkyl benzene sulfonate on granular media, *in* Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112, (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 351-365, 1963.
- 0626 **Faber, H. A.; Taylor, Keene.** Research information retrieval system for water supply and pollution control: Am. Water Works Assoc. Jour., v. 55, no. 12, p. 1477-1484, Dec. 1963.
- 0627 **Fahnestock, R. K.** Morphology and hydrology of a glacial stream—White River, Mount Rainier, Washington: U.S. Geol. Survey Prof. Paper 422-A, p. A1-A70, 1963, [Feb. 1964].
- 1306 **Fairbridge, R. W.** Mean sea level related to solar radiation during the last 20,000 years, *in* Changes of climate: UNESCO Arid Zone Research Ser., v. 20, p. 229-242, 1963.
- 0628 **Falvey, H. T.** Use of an electronic computer to obtain flow nets for a channel with 90° into-the-flow offsets: U.S. Bur. Reclamation Hydraulics Branch Rept. Hyd. 500, 28 p., Nov. 1963.
- 1238 **Farnes, P. E.; Nelson, M. W.; Freeman, T. G.** Soil moisture in forecasting, *in* Western Snow Conference, 31st ann. mtg., Yosemite Natl. Park, Calif., 1963, Proc.: Tacoma, Wash., p. 6-14, 1963.
- 0629 **Farvolden, R. N.** Bedrock channels of southern Alberta, *in* Early contributions to the groundwater hydrology of Alberta: Alberta Research Council Bull. 12, p. 63-75, 1963.
- 0630 **Farvolden, R. N.** Bedrock topography, Edmonton—Red Deer map-area, Alberta, *in* Early contributions to the groundwater hydrology of Alberta: Alberta Research Council Bull. 12, p. 57-62, 1963.
- 0631 **Farvolden, R. N.** Rate of groundwater recharge near Devon, Alberta, *in* Early contribution to the groundwater hydrology of Alberta: Alberta Research Council Bull. 12, p. 98-105, 1963.

- 0632 **Farvolden, R. N.** The Driedmeat Lake artificial recharge project, in Early contributions to the groundwater hydrology of Alberta: Alberta Research Council Bull. 12, p. 76-87, 1963.
- 0686 **Farvolden, R. N.** Geologic controls on ground-water storage and base flow: Jour. Hydrology [Amsterdam], v. 1, no. 3, p. 219-249, 1963.
- Fatt, Irving.** See Gray, D. H. 0789
- Faust, S. D.** See Aly, O. M. 0062
- 0633 **Fawcett, A. E.** Hydraulic gravel packing for deep water wells: Ground Water, v. 1, no. 1, p. 16, 24, Jan. 1963.
- 1444 **Federal Council, Sci. and Technology.** Research and development on natural resources: U.S. Federal Council, Sci. and Technology Pub. 1, 134 p., May 1963.
- 1445 **Federal Council, Sci. and Technology.** (Inter-Agency Committee on Oceanography) Bibliography of oceanographic publications: U.S. Inter-Agency Comm. Oceanography ICO Pamph. 9, 23 p., Apr. 1963.
- 1446 **Federal Council, Sci. and Technology.** Federal water resources research activities: U.S. 88th Cong., 1st sess., Senate Comm. Interior and Insular Affairs, Comm. Print. 213 p., 1963.
- 0634 **Feely, H. W.; Walton, Alan; Barnett, C. R.** Radioisotope uses in the treatment and distribution of water supplies: Am. Water Works Assoc. Jour., v. 55, no. 2, p. 193-199, Feb. 1963.
- 0635 **Feltz, H. R.; Hanshaw, B. B.** Preparation of water sample for carbon-14 dating: U.S. Geol. Survey Circ. 480, 3 p., Nov. 1963.
- Feltz, H. R.** See Wark, J. W. 1152
- 0636 **Ferguson, G. E.** Advances in automatic sampling: Am. Water Works Assoc. Jour., v. 55, no. 3, p. 405-406, Mar. 1963.
- Fernald, F. G.** See Dennis, A. S. 0173
- 0638 **Ferris, J. G.** Cyclic water-level fluctuations as a basis for determining aquifer transmissibility, in Bentall, Ray, compiler, Methods of determining permeability, transmissibility and drawdown: U.S. Geol. Survey Water-Supply Paper 1536-I, p. 305-318, Dec. 1963.
- 0639 **Ferris, J. G.; Knowles, D. B.** The slug-injection test for estimating the coefficient of transmissibility of an aquifer, in Bentall, Ray, compiler, Methods of determining permeability, transmissibility and drawdown: U.S. Geol. Survey Water-Supply Paper 1532-1, p. 229-304, Dec. 1963.
- Ferris, J. G.** See Harshbarger, J. W. 0820
- 0637 **Ferron, A. G.** Velocity profile effects on the discharge coefficient of pressure-differential meters: Am. Soc. Mech. Engineers Trans., Ser. D, Jour. Basic Eng., v. 85, no. 3, p. 338-346, Sept. 1963.
- 0640 **Feth, J. H.; Hem, J. D.** Reconnaissance of headwater springs in the Gila River drainage basin, Arizona: U.S. Geol. Survey Water-Supply Paper 1619-H, p. H1-H54, Apr. 1963.
- 0641 **Feth, J. H.** Tertiary lake deposits in western conterminous United States: Science, v. 139, no. 3550, p. 107-110, Jan. 11, 1963.
- 0642 **Feulner, A. J.; Schupp, R. G.** Seasonal changes in the chemical quality of shallow ground water in northwestern Alaska: Art. 52 in U.S. Geol. Survey Prof. Paper 475-B, p. B189-B191, June 1963.

- 1316 **Feulner, A. J.** Data on wells in the King Salmon area, Alaska: Alaska Dept. Health and Welfare Hydrol. Data No. 24, 18 p., 1963.
- 1317 **Feulner, A. J.** Water-supply potential in the Ohlson Mountain area, Kenai Peninsula, Alaska: Alaska Dept. Health and Welfare Hydrol. Data No. 22, 16 p., 1963.
- 0750 **Fiering, M. B.** Use of correlation to improve estimates of the mean and variance: U.S. Geol. Survey Prof. Paper 434-C, p. C1-C9, Feb. 1963.
- 0751 **Fink, F. W.** Saline-water development poses problems in metal corrosion: Ground Water, v. 1, no. 4, p. 21-25, Oct. 1963.
- 0752 **Fishman, M. J.; Skougstad, M. W.** Indirect spectrophotometric determination of traces of bromide in water: Anal. Chemistry, v. 35, no. 2, p. 146-149, Feb. 1963.
- Fishman, M. J.** See Skougstad, M. W. 0854
- 0753 **Flaxman, E. M.** Channel stability in undisturbed cohesive soils: Am. Soc. Civil Engineers Proc. Paper 3462, Hydraulics Div. Jour., v. 89, no. HY2, p. 87-96, Mar. 1963.
- 0754 **Fleming, J. D.; Boland, Paul; Harris, J. N.** Porosity measurements by air displacement: Materials Research and Standards, v. 3, no. 1, p. 20-24, Jan. 1963.
- 0755 **Fletcher, M. H.** A vertical-axis transmission-type filter-fluorometer for solutions: Anal. Chemistry, v. 35, no. 3, p. 288-292, Mar. 1963.
- 0756 **Fletcher, M. H.** Study of multicomponent mixtures in solution with a vertical-axis transmission-type filter-fluorometer: Anal. Chemistry, v. 35, no. 3, p. 278-288, Mar. 1963.
- Follett, C. R.** See Cronin, J. G. 0150
- 0757 **Ford, M. E., Jr.** Air injection for control of reservoir limnology: Am. Water Works Assoc. Jour., v. 55, no. 3, p. 267-274, Mar. 1963.
- Forsberg, H. G.** See Knutsson, G. 1413
- 1258 **Foster, R. F.** Relationships between the concentration of radionuclides in Columbia River water and fish, in Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm. Div. Tech. Inf. TID-7664, p. 269-294, July 1963.
- 0758 **Foxworthy, B. L.; Washburn, R. L.** Ground water in the Pullman area, Whitman County, Washington: U.S. Geol. Survey Water-Supply Paper 1655, 71 p., Apr. 1963.
- 0759 **Francis, C. J.** Planning engineering programs in agricultural watersheds: Agr. Eng., v. 44, no. 12, p. 670-671, 674, Dec. 1963.
- Frauenthal, H. L.** See Perlmutter, N. M. 0603
- 0760 **Frazier, R. E.** Polarographic determination of nitrate nitrogen in water: Am. Water Works Assoc. Jour., v. 55, no. 5, p. 624-630, May 1963.
- Freeman, T. G.** See Farnes, P. E. 1238
- 1311 **Frenkiel, F. N. (compiler)** Conference on fluid dynamics in geophysics, conference summary: Am. Meteorol. Soc. Bull., v. 44, no. 1, p. 28-34, Jan. 1963.
- 0761 **Frenkiel, J.** On the accuracy of the combined energy-budget and mass-transfer method: Jour. Geophys. Research, v. 68, no. 17, p. 4989-4922, Sept. 1, 1963.

- 1322 **Frere, M. H.** (and others) The behavior of radioactive fallout in soils and plants: Natl. Acad. Sci.—Nat'l. Research Council Pub. 1092, 32 p., 1963.
- 0762 **Frey, D. G.** (editor) Limnology in North America: Madison, University of Wisconsin Press, 734 p., 1963.
- Friedman, Irving.** See Woodcock, A. H. 1210
- 1247 **Friend, A. G.** The aqueous behavior of strontium-85, cesium-137, zinc-65, and cobalt-60 as determined by laboratory type studies, in Kornegay, B. H., and others, eds., Transport of radioisotopes in fresh water systems: U.S. Atomic Energy Comm., Div. Tech. Inf. TID-7664, p. 43-60, July 1963.
- 0763 **Fritschen, L. J.; vanBavel, C. H. M.** Evaporation from shallow water and related micrometeorological parameters: Jour. Appl. Meteorology, v. 2, no. 3, p. 407-411, June 1963.
- 0764 **Fritschen, L. J.; vanBavel, C. H. M.** Experimental evaluation of models of latent and sensible heat transport over irrigated surfaces: Internat. Assoc. Sci. Hydrology Pub. 62, p. 159-171, 1963.
- Fritschen, L. J.** See vanBavel, C. H. M. 1106
- 0740 **Frost, C. R.** Decontamination of radioactive aqueous effluent by the calcium-ferric phosphate process: Am. Water Works Assoc. Jour., v. 55, no. 5, p. 581-586, May 1963.
- 0765 **Frye, P. M.** Establishment of crest-stage gages at discontinued gaging stations, in Mesnier, G. N., and Iseri, K. T., compilers, Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, p. Z25-Z26, Nov. 1963.
- Gabrysich, R. K.** See Wood, L. A. 1208
- Gaida, K. H.** See Engelhardt, W. V. 0221
- 0741 **Gallaher, J. T.** Geology and hydrology of alluvial deposits along the Ohio River in the Spottsville and Reed areas, Kentucky: U.S. Geol. Survey Hydrol. Inv. Atlas HA-96, two sheets, Dec. 1963.
- 0745 **Gallaher, J. T.** Geology and hydrology of the alluvial deposits along the Ohio River in the Hawesville and Cloverport areas, Kentucky: U.S. Geol. Survey Hydrol. Inv. Atlas HA-72, one sheet, Sept. 1963.
- 0766 **Gallaher, J. T.** Geology and hydrology of alluvial deposits along the Ohio River in the Lewisport and Owensboro areas, Kentucky: U.S. Geol. Survey Hydrol. Inv. Atlas HA-74, two sheets, 1963 [Jan. 1964].
- Gallatin, M. H.** See Batchelder, A. R. 0100
- Galli, Carlos.** See Segerstrom, Kenneth. 1385
- 0767 **Gambell, A. W.** Sulfate and nitrate content of precipitation over parts of North Carolina and Virginia: Art. 114 in U.S. Geol. Survey Prof. Paper 475-C, p. C209-C211, Nov. 1963.
- 0742 **Garde, R. J.; Ranga Raju, K. G.** Regime criteria for alluvial streams: Am. Soc. Civil Engineers Proc. Paper 3705, Hydraulics Div. Jour., v. 89, no. HY6, p. 153-164, Nov. 1963.
- Gardner, G. H. F.** See Crane, F. E. 0144
- Gardner, W. H.** See Rawlins, S. L. 0712

- 0768 **Gardner, W. R.; Ehlig, C. F.** The influence of soil water on transpiration by plants: *Jour. Geophys. Research*, v. 68, no. 20, p. 5719-5724, Oct. 15, 1963.
- Garrett, A. A. *See* Dutcher, L. C. 0199
- 0769 **Garza, Sergio.** Ground-water discharge from the Edwards and associated limestones, 1955-62, San Antonio area, Texas: [Texas] Edwards Underground Water District Bull. 2, 4 p., July 1963.
- 0770 **Garza, Sergio.** Records of precipitation, aquifer head, and ground-water discharge to the Edwards and associated limestones, 1960-62, San Antonio area, Texas: [Texas] Edwards Underground Water District Bull. 3, 7 p., Oct. 1963.
- 0771 **Gates, J. S.** Hydrogeology of Middle Canyon, Oquirrh Mountains, Tooele County, Utah: U.S. Geol. Survey Water-Supply Paper 1619-K, p. K1-K40, Sept. 1963.
- 0772 **Gates, J. S.** Selected hydrologic data, Tooele Valley, Tooele County, Utah: Utah State Engineer Basic-Data Rept. 7, 23 p., 1963.
- Gates, J. S. *See* Smith, Ralph E. 0859
- 0773 **Gatewood, J. S.; Wilson, Alfonso.** Upper Salinas River basin. *in* Thomas, H. E., and others, Effects of drought along Pacific Coast in California: U.S. Geol. Survey Prof. Paper 372-G, p. G19, Nov. 1963.
- Gay, L. W. *See* Anderson, H. W. 0046
- 0774 **George, J. R.; Anderson, P. W.** Water quality studies of New Jersey streams: New Jersey State Dept. Health, Public Health News, v. 44, no. 6, p. 154-158, June 1963.
- Geraghty, J. J. *See* Perlmutter, N. M. 0599
- Geurin, J. W. *See* Swindel, G. W., Jr. 1021
- 0775 **Giefer, G. J. (compiler)** Water wells—An annotated bibliography: California Univ. Water Resources Center Archives, Archives Ser. Rept. 13, 141 p., Apr. 1963.
- Giefer, G. J. *See* Barnes, Cynthia. 1502
- 0776 **Giessner, F. W.** Data on water wells and springs in the Chuckwalla Valley area, Riverside County, California: California Dept. Water Resources Bull. 91-7, 77 p., 1963.
- 1432 **Giessner, F. W.** Data on water wells and springs in the Rice and Vidal Valley areas, Riverside and San Bernardino Counties, California: California Dept. Water Resources Bull. 91-8, 35 p., 1963.
- 0777 **Gill, H. E.; Seaber, P. R.; Vecchioli, John; Anderson, H. R.** Evaluation of geologic and hydrologic data from the test-drilling program at Island Beach State Park, New Jersey: New Jersey Div. Water Policy and Supply Water Resources Circ. 12, 25 p., 1963.
- 0778 **Giroux, P. R.; Huffman, G. C.** Summary of ground-water conditions in Michigan, 1962: Michigan Geol. Survey Div. Water-Supply Rept. 7, 80 p., 1963.
- 0779 **Giusti, E. V.; Schneider, W. J.** Comparison of drainage on topographic maps of the Piedmont province: Art. 212 *in* U.S. Geol. Survey Prof. Paper 450-E, p. E118-E120, Mar. 1963.
- 0780 **Giusti, E. V.** Distribution of river basin area in the conterminous United States: Internat. Assoc. Sci. Hydrology Bull., v. 8, no. 3, p. 20-29, Sept. 1963.

- Gnaedinger, J. P.** *See* Johnson, A. I. 1338
- 0781 **Goddard, G. C., Jr.** Water-supply characteristics of North Carolina streams: U.S. Geol. Survey Water-Supply Paper 1761, 223 p., Dec. 1963.
- 0782 **Goddell, B. C.** A reappraisal of precipitation interception by plants and attendant water loss: *Jour. Soil and Water Conserv.*, v. 18, no. 6, p. 231-234, Nov.-Dec. 1963.
- Godfrey, R. G.** *See* Norvitch, R. F. 0549
- Goerlitz, D. F.** *See* Lamar, W. L. 0283
- 0783 **Gold, L. W.** Influence of the snow cover on the average annual ground temperature at Ottawa, Canada: *Internat. Assoc. Sci. Hydrology Pub.* 61, p. 82-91, 1963.
- 0784 **Goldthwait, R. P.; McKellar, I. C.; Cronk, Casper.** Fluctuations of Crillon Glacier system, southeast Alaska: *Internat. Assoc. Sci. Hydrology Bull.*, v. 8, no. 1, p. 62-74, Apr. 1963.
- 0785 **Goodcell, R. B., Jr.** Proposals for solving the Federal-State water rights problems: *Am. Water Works Assoc. Jour.*, v. 55, no. 8, p. 957-962, Aug. 1963.
- 0786 **Gorder, Z. A.** Television inspection of a gravel pack well: *Am. Water Works Assoc. Jour.*, v. 55, no. 1, p. 31-34, Jan. 1963.
- 0787 **Gordon, E. D.** Grants-Bluewater area, *in* Thomas, H. E., and others, Effects of drought in the Rio Grande Basin: *U.S. Geol. Survey Prof. Paper* 372-D, p. D12-D14, Mar. 1963.
- 0788 **Gow, A. J.** The inner structure of the Ross Ice Shelf at Little America V, Antarctica, as revealed by deep core drilling: *Internat. Assoc. Sci. Hydrology Pub.* 61, p. 272-284, 1963.
- Graeff, G. D., Jr.** *See* Page, L. V. 0552
- Grantham, P. E.** *See* Harvey, E. J. 0822
- Gray, D. A.** *See* Ineson, J. 0687
- 0789 **Gray, D. H.; Fatt, Irving; Bergamini, Gabriella.** The effect of stress on permeability of sandstone cores: *Soc. Petroleum Engineers Jour.*, v. 3, no. 2, p. 95-100, June 1963.
- 0790 **Gray, H. H.** Geology of the Upper Patoka drainage basin: *Indiana Geol. Survey Spec. Rept.* 2, 23 p., Dec. 1963.
- Green, A. R.** *See* Carter, J. R. 0246
- Green, M. J.** *See* Cole, J. A. 0240
- Greenkorn, R. A.** *See* Johnson, C. R. 0337
- Greenman, D. W.** *See* LaRocque, G. A., Jr. 1453
- 0791 **Greer, J. E.; Christiansen, E. A.** Geology and groundwater resources of the Wynyard area, Saskatchewan: *Saskatchewan Research Council, Geology Div. Rept.* 3, 56 p., 1963.
- Griggs, R. L.** *See* Conover, C. S. 0400
- 1323 **Gross, M. G.; McManus, D. A.; Creager, J. S.** Preliminary report on the sediments and radioactivity in the vicinity of the Columbia River effluent: *Washington [State] Univ. Dept. Oceanography Tech. Rept.* 84, 32 p., Jan. 1963.

- 0792 **Grossman, Max; Sherman, A. L.** Present and prospective use of water by the manufacturing industries of New Jersey: New Jersey Div. Water Policy and Supply Water Resources Circ. 11, 12 p., June 1963.
- 0793 **Grover, B. L.; Hotchkiss, C. W.** An electric point gauge and tube orifice plates for measuring flow rates in furrow irrigation: Soil Sci. Soc. America Proc., v. 27, no. 5, p. 584-586, Sept.-Oct. 1963.
- Grubbs, D. K.** *See* White, D. E., 1146
- 0744 **Gschwendtner, J. V. G.** Valencia Lake as a hydrological indicator, 1901-62: Internat. Assoc. Sci. Hydrology Bull., v. 8, no. 3, p. 64-70, Sept. 1963.
- 0794 **Gumbel, E. J.** Statistical forecast of droughts: Internat. Assoc. Sci. Hydrology Bull., v. 8, no. 1, p. 5-23, Apr. 1963.
- 0795 **Guy, H. P.** (and others) A program for sediment control in the Washington Metropolitan region: Interstate Comm. Potomac River Basin Tech. Bull. 1963-1, 48 p., May 1963.
- Guy, H. P.** *See* Sayre, W. W. 0908
- Haas, H. J.** *See* Willis, W. O. 1139
- Hackett, J. E.** *See* Maxey, G. B. 0539
- Haddor, Yousef.** *See* Newport, T. G. 0473
- 0796 **Hadley, R. F.** Hydrology of stock-water development in southeastern Idaho: U.S. Geol. Survey Water-Supply Paper 1475-P, p. 563-599, Nov. 1963.
- 0797 **Haefeli, R.** A numerical and experimental method for determining ice motion in the central parts of ice sheets: Internat. Assoc. Sci. Hydrology Pub. 61, p. 253-260, 1963.
- Haffty, Joseph.** *See* Durum, W. H. 0198
- Hagenstein, P. R.** *See* Webster, H. H. 1142
- Hagood, M. A.** *See* Swarner, L. R. 1017
- 0743 **Hahl, D. C.; Mitchell, C. G.** Dissolved-mineral inflow to Great Salt Lake and chemical characteristics of the Salt Lake brine. Part 1—Selected hydrologic data: Utah Geol. and Mineralog. Survey Water Resources Bull. 3, pt. 1, 40 p., Oct. 1963.
- Hahn, G. W.** *See* Allen, W. B. 0060
- Haise, H. R.** *See* Jensen, M. E. 0683
- 0798 **Hall, F. R.** Springs in the vicinity of Socorro, New Mexico, in Guidebook of the Socorro Region, New Mexico, New Mexico Geol. Soc., 14th Field Conf., 1963: Socorro, New Mexico Bur. Mines and Mineral Resources, p. 160-170, 1963.
- 0799 **Hall, F. R.; Bushman, F. X.** Field Trip No. 3, Hydrology of the Socorro area, in Guidebook of the Socorro Region, New Mexico, New Mexico Geol. Soc., 14th Field Conf., 1963: Socorro, New Mexico Bur. Mines and Mineral Resources, p. 53-59, 1963.
- Hall, J. F.** *See* Bersticker, A. C. 1355
- 0684 **Hall, W. A.; Howell, D. T.** Estimating flood probabilities within specific time intervals: Jour. Hydrology [Amsterdam], v. 1, no. 3, p. 265-271, 1963.

- 1043 **Hall, W. A.; Howell, D. T.** The optimization of single-purpose reservoir design with the application of dynamic programming to synthetic hydrology samples: *Jour. Hydrology* [Amsterdam], v. 1, no. 4, p. 355-363, 1963.
- 1285 **Hall, W. A.** The Universities Council on Hydrology: Texas A and M Univ., Water Resources Inst., Water for Texas Conf., 8th ann., College Station, Texas, 1963, Proc., p. 14-17, 1963.
- 1337 **Hall, W. A.** (editor) Water Resources Economics Conference, Lake Tahoe, California, 1963, Proceedings: California Univ. Water Resources Center Rept. 4, 95 p., 1963.
- Halpenny, L. C.** See Cushman, R. L. 0158
- 0800 **Hammad, H. Y.** Seepage under dams: Am. Soc. Civil Engineers Proc. Paper 3570, Soil Mechanics and Foundations Div. Jour., v. 89, no. SM4, p. 25-44, July 1963.
- Hammond, L. C.** See Stewart, E. H. 0990
- 0801 **Hampton, E. R.** Ground water in the coastal dune area near Florence, Oregon: U.S. Geol. Survey Water-Supply Paper 1539-K, p. K1-K36, Feb. 1963.
- 0802 **Hampton, E. R.** Records of wells, water levels and chemical quality of ground water in the Molalla-Salem slope area, northern Willamette Valley, Oregon: Oregon State Engineer Ground Water Rept. 2, 174 p., Aug. 1963.
- 0803 **Hancock, J. C.** Public health aspects of individual water wells: *Ground Water*, v. 1, no. 3, p. 27-29, July 1963.
- 1245 **Hanes, Frank.** Hydrologic data telemetry in the Corps of Engineers, *in* Western Snow Conference, 31st ann. mtg., Yosemite Natl. Park, Calif., 1963, Proc.: Tacoma, Wash., p. 81-86, 1963.
- 0804 **Hanks, R. J.; Bowers, S. A.** Influence of variations in the diffusivity-water content relation on infiltration: *Soil Sci. Soc. America Proc.*, v. 27, no. 3, p. 263-265, May-June 1963.
- 0805 **Hanks, R. J.; Bowers, S. A.** Two-dimensional electric simulator for nonsteady-state soil moisture flow: *Soil Sci. Soc. America Proc.*, v. 27, no. 3, p. 240-241, Mar.-Apr. 1963.
- Hanly, T. F.** See Stermitz, Frank. 1001
- 0806 **Hanna, G. P., Jr. (and others)** Acid mine drainage research potentialities: *Water Pollution Control Federation Jour.*, v. 35, no. 3, p. 275-296, Mar. 1963.
- 1271 **Hanna, G. P., Jr.; Brant, R. A.** Stratigraphic relations to acid mine water production, *in* Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112 (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 476-492, 1963.
- 0807 **Hansen, A. J., Jr.; Schiner, G. R.** Ground-water levels in Rhode Island, 1960-1962: *Rhode Island Water Resources Coordinating Board Hydrol. Bull.* 5, 49 p., 1963.
- 0808 **Hansen, R. G.; Leeson, H. W.** Water supply conditions in southern California during 1960-1961: *California Dept. Water Resources Bull.* 39-61; v. 1, Text, 90 p.; v. 2 and 3, Water-level data, various pagination, Feb. 1963.
- 1408 **Hansen, V. E.** Unique consumptive use curve related to irrigation practice: Am. Soc. Civil Engineers Proc. Paper 3449, Irrig. and Drainage Div. Jour., v. 89, no. IR 1, p. 43-50, Mar. 1963.

- Hanshaw, B. B.** *See* Feltz, H. R. 0635
- Hanson, G. F.** *See* Weeks, E. P. 1175
- 1290 **Harden, R. W.** Problems in ground water supply and management: Texas A and M Univ., Water Resources Inst., Water for Texas Conf., 8th ann., College Station, Texas, 1963, Proc., p. 34-36, 1963.
- Harder, A. H.** *See* Hodges, A. L., Jr. 1347
- 0809 **Hardison, C. H.; Martin, R. O. R.** Low-flow frequency curves for selected long-term stream-gaging stations in Eastern United States: U.S. Geol. Survey Water-Supply Paper 1669-G, p. G1-G30, July 1963.
- 0810 **Hardison, C. H.; Martin, R. O. R.** Water-supply characteristics of streams in the Delaware River basin and in southern New Jersey: U.S. Geol. Survey Water-Supply Paper 1669-N, p. N1-N45, Nov. 1963.
- Hardt, W. F.** *See* Davis, G. E. 0165
- 0811 **Hardt, W. F.** Public water supplies in Gloucester County, New Jersey: New Jersey Div. Water Policy and Supply Water Resources Circ. 9, 55 p., 1963.
- Harleman, D. R. F.** *See* Rumer, R. R., Jr. 0899
- 1476 **Harleman, D. R. F.; Melhorn, P. F.; Rumer, R. R., Jr.** Dispersion-permeability correlation in porous media: Am. Soc. Civil Engineers Proc. Paper 3459, Hydraulics Div. Jour., v. 89, no. HY2, p. 67-85, Mar. 1963.
- 1477 **Harleman, D. R. F.; Rumer, R. R., Jr.** Longitudinal and lateral dispersion in an isotropic porous medium: Jour. Fluid Mechanics, v. 16, pt. 3, p. 385-394, 1963.
- 0814 **Harmeson, R. H.; Vogel, O. W.** Artificial recharge and pollution of ground water: Ground Water, v. 1, no. 1, p. 11-15, Jan. 1963.
- Harmon, J. A.** *See* Navone, Remo. 0460
- 1418 **Harpaz, Y.** (and others) The place of isotopé methods in ground water research, in Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency, Proc. Ser. 71, p. 175-191, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- Harris, B.** *See* Allis, J. A. 0061
- 0815 **Harris, H. B.; Moore, G. K.; West, L. R.** Geology and ground-water resources of Colbert County, Alabama: Alabama Geol. Survey County Rept. 10, 71 p., 1963.
- 0816 **Harris, H. B.; Peace, R. R., Jr.; Harris, W. F., Jr.** Geology and ground-water resources of Lauderdale County, Alabama: Alabama Geol. Survey County Rept. 8, 178 p., 1963.
- Harris, J. N.** *See* Fleming, J. D. 0754
- Harris, W. F., Jr.** *See* Harris, H. B. 0816
- Harris, W. F., Jr.** *See* McMaster, W. M. 1484
- 0817 **Harrison, D. S.; Speir, W. H.; Thomas, F. H.** Installation and operation of a set of water-table plots on an organic soil: Am. Soc. Agr. Engineers Trans. (Gen. Ed.), v. 6, no. 1, p. 3-5, June 1963.
- 0818 **Harrold, L. L.** Water intake by soil—experiments for high school students: U.S. Dept. Agriculture Misc. Pub. 925, 10 p., 1963.

- 0819 **Harrold, L. L.; Marston, R. B.; Schwab, G. O.** Water conservation in Ohio: Ohio Jour. Sci., v. 63, no. 2, p. 49-55, Mar. 1963.
- Harshbarger, J. W. *See* Skibitzke, H. E. 0622
- 0820 **Harshbarger, J. W.; Ferris, J. G.** Interdisciplinary training program in scientific hydrology: Ground Water, v. 1, no. 2, p. 11-14, Apr. 1963.
- 0821 **Hart, D. L.** Ground-water levels in observation wells in Oklahoma, 1956-60: Oklahoma City, Oklahoma Water Resources Board, 196 p., 1963.
- Harvey, E. J. *See* Callahan, J. A. 0030
- Harvey, E. J. *See* Boswell, E. H. 0138
- Harvey, E. J. *See* Kapustka, S. F. 0354
- 0822 **Harvey, E. J.; Grantham, P. E.** Interim report on the hydrology of the Cockfield Formation in the vicinity of Jackson, Mississippi: Mississippi Board Water Commissioners Bull. 63-6, 19 p., June 1963.
- 0823 **Harvey, E. J.; Shows, T. N.** Well records, logs, and water analyses, George and Jackson Counties, Mississippi: Mississippi Board Water Commissioners Bull. 63-1, 43 p., Jan. 1963.
- 0824 **Harvey, E. J.** Compilation of aquifer test data for Mississippi: Mississippi Board Water Commissioners Bull. 63-4, 10 p., Apr. 1963.
- Harvey, E. J. *See* Wasson, B. E. 1155
- Haskell, E. E., Jr. *See* Bianchi, W. C. 0121
- Hatchett, J. L. *See* Kister, L. R. 0376
- Hauser, V. L. *See* vanBavel, C. H. M. 1147
- Haushild, W. L. *See* Simons, D. B. 0894
- 0825 **Hawaii Div. of Water and Land Devel.** Interim report on Hamakua-Kohala water study, Island of Hawaii: Hawaii Div. Water and Land Devel. Circ. 13, 23 p., Jan. 1963.
- 0826 **Hawaii Div. of Water and Land Devel.** A brief description of the Upper Hamakua Ditch: Hawaii Div. Water and Land Devel. Circ. 18, 13 p., Mar. 1963.
- 0827 **Hawaii Div. of Water and Land Devel.** Preliminary report on legal problems to be studied in connection with the Hamakua-Kohala water study, Island of Hawaii: Hawaii Div. Water and Land Devel. Circ. 17, 15 p., Mar. 1963.
- 0828 **Hawkes, H. A.** The ecology of waste water treatment: New York, The Macmillan Co., 203 p., 1963.
- Hawkins, D. B. *See* Theobald, P. K., Jr. 0961
- Hawkins, M. F., Jr. *See* Davis, E. G., Jr. 0164
- 0746 **Hay, John.** Upper Rio Grande, embattled river—Case history 2, *in* Hodge, Carle, ed., Aridity and man: Am. Assoc. Adv. Sci. Pub. 74, p. 491-498, 1963.
- 1235 **Hayes, F. R.** Chemical characteristics of fresh water, *in* Great Lakes Research Conf., 6th, Ann Arbor, Michigan, 1963, Proc.: Michigan Univ. Great Lakes Research Div. Pub. 10, p. 112-117, 1963.
- Haynes, G. L., Jr. *See* Reiland, L. J. 0927

- 0829 **Haywood, R. W., Jr.** The place of multipurpose reservoirs in water supply planning: Am. Water Works Assoc. Jour., v. 55, no. 3, p. 263-266, Mar. 1963.
- Healy, T. W. *See* LaMer, V. K. 0287
- 0830 **Heath, J. R.** Recreation management---no!: Am. Forests, v. 69, no. 11, p. 9, 72, 74, 76, Nov. 1963.
- 0748 **Heath, R. C.; Mack, F. K.; Tannenbaum, J. A.** Ground-water studies in Saratoga County, New York: New York Water Resources Comm. Bull. GW-49, 128 p., 1963.
- 1309 **Heath, R. C.** Ground water in New York State: The Conservationist, v. 17, no. 7, p. 8-14, 1963.
- Heath, V. T. *See* Peterson, H. V. 0605
- 1449 **Heckman, R. A.** Feasibility of using nuclear explosives to extract water from lunar rocks: Livermore, Calif. Univ. Lawrence Radiation Lab. UCRL 7517, 13 p., Sept. 1963. [Available from U.S. Dept. Commerce, Office of Tech. Services.]
- 0831 **Heindl, L. A.; Armstrong, C. A.** Geology and ground-water conditions in the Gila Bend Indian Reservation, Maricopa County, Arizona: U.S. Geol. Survey Water-Supply Paper 1647-A, p. A1-A48, Mar. 1963.
- 0832 **Heinricks, W. E., Jr.; Seward, F. A., Jr.** Geophysics in ground-water studies in the southwest: Arizona Geol. Soc. Digest, v. 6, p. 55-60, Nov. 1963.
- Hellmers, Henry. *See* Krammes, J. S. 0389
- 0749 **Hely, A. G.; Olmsted, F. H.** Some relations between streamflow characteristics and the environment in the Delaware River region: U.S. Geol. Survey Prof. Paper 417-B, p. B1-B25, Dec. 1963.
- Hem, J. D. *See* Durum, W. H. 0197
- Hem, J. D. *See* Feth, J. H. 0640
- 0747 **Hem, J. D.** Increased oxidation rate of manganese ions in contact with feldspar grains: Art. 116 in U.S. Geol. Survey Prof. Paper 475-C, p. C216-C217, Nov. 1963.
- 0833 **Hem, J. D.** Some aspects of chemical equilibrium in ground water: Ground Water, v. 1, no. 3, p. 30-34, July 1963.
- 0834 **Hem, J. D.** Aqueous solutions, in United States National report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 518-520, June 1963.
- 0835 **Hem, J. D.** Chemical equilibria and rates of manganese oxidation: U.S. Geol. Survey Water-Supply Paper 1667-A, p. A1-A64, Mar. 1963.
- 0836 **Hem, J. D.** Chemical equilibria affecting the behavior of manganese in natural water: Internat. Assoc. Sci. Hydrology Bull., v. 8, no. 3, p. 30-37, Sept. 1963.
- Hem, J. D. *See* White, D. E. 1401
- 0837 **Henderson, F. M.** Some properties of the unit hydrograph: Jour. Geophys. Research, v. 68, no. 16, p. 4785-4793, Aug. 15, 1963.
- 1498 **Henderson, F. M.** Flood waves in prismatic channels: Am. Soc. Civil Engineers Proc. Paper 3568, Hydraulics Div. Jour., v. 89, no. HY4, p. 39-67, July 1963.

- 1462 **Henderson, G. E.** Planning water systems for farm and home: Athens, Ga., Southern Assoc. Agr. Eng. and Vocational Agriculture, 105 p., 1963.
- 0938 **Hendrickson, B. H.** (and others) Runoff and erosion control studies in Cecil Soil in the southern Piedmont: U.S. Dept. Agriculture Tech. Bull. 2181, 33 p., Apr. 1963.
- 0939 **Hendrickson, G. E.** Ground water for public supply in St. Croix, Virgin Island: U.S. Geol. Survey Water-Supply Paper 1663-D, p. D1-D27, Nov. 1963.
- Herrick, S. M.** See Stewart, J. W. 1009
- 0940 **Hershfield, D. M.** Precipitation, in United States National report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 530-555, June 1963.
- Hess, R. H.** See Lawrence, R. E. 0305
- 0941 **Heukelekian, H.; Voelker, R. A.** Factors influencing the bacteriological behavior of private home wells: Internat. Jour. Air and Water Pollution, v. 7, nos. 4-5, p. 303-316, June 1963.
- 1388 **Hewitt, C. H.** Analytical techniques for recognizing water-sensitive reservoir rocks: Jour. Petroleum Technology, v. 15, no. 8, p. 813-818, Aug. 1963.
- 0993 **Hidore, J. J.** Length of record and reliability of annual runoff means: Jour. Hydrology [Amsterdam], v. 1, no. 4, p. 344-354, 1963.
- 0942 **Hill, L. W.; Rice, R. M.** Converting from brush to grass increases water yield in southern California: Jour. Range Management, v. 16, no. 6, p. 300-305, Nov. 1963.
- 0943 **Hilton, G. S.** Water-resources reconnaissance in southeastern part of Honey Lake Valley, Lassen County, California: U.S. Geol. Survey Water-Supply Paper 1619-Z, p. Z1-Z8, Apr. 1963.
- 1436 **Hino, Mikio.** Turbulent flow with suspended particles: Am. Soc. Civil Engineers Proc. Paper 3579, Hydraulics Div. Jour., v. 89, no. HY4, p. 161-185, July 1963.
- 0934 **Hirashima, G. T.** Influence of water-development tunnels on streamflow—ground-water relations in Haiku-Kahaluu area, Oahu, Hawaii: Hawaii Div. Water and Land Devel. Circ. C21, 11 p., 1963.
- 0945 **Hirashima, G. T.** Aspects of ground-water storage and depletion along the Molokai irrigation tunnel, Molokai, Hawaii: Hawaii Div. Water and Land Devel. Circ. C20, 21 p., 1963.
- Hoadley, A. W.** See Weaver, Leo. 1171
- 0946 **Hobbs, E. H.; Krogman, K. K.** Water use in a southern Alberta irrigation district: Am. Soc. Agr. Engineers Trans. (Gen. Ed.), v. 6, no. 3, p. 266-267, Nov. 1963.
- 0947 **Hobbs, H. W.** (compiler) Hydrologic data for experimental agricultural watersheds in the United States, 1956-59: U.S. Dept. Agriculture Misc. Pub. 945, 9 p. plus 600 data sheets, Nov. 1963.
- 0935 **Hobbs, J. A.; Wittsell, L. E.** Mechanics of water movement and storage in soils—a teaching technique: Agronomy Jour., v. 55, no. 1, p. 67-70, Jan.-Feb. 1963.
- 0948 **Hodge, Carle.** (editor) Aridity and man: Am. Assoc. Adv. Science Pub. 74, 584 p., 1963.
- 1347 **Hodges, A. L., Jr.; Rogers, S. M.; Harder, A. H.** Gas and brackish water in fresh-water aquifers, Lake Charles area, Louisiana: Louisiana Dept. Conserv., Geol. Survey; and Louisiana Dept. Public Works Water Resources Pamph. 13, 35 p., Sept. 1963.

- 0949 **Hodson, W. G.** Geology and ground-water resources of Wallace County, Kansas: Kansas Geol. Survey Bull. 161, 108 p., Nov. 1963.
- Hoekstra, K. E.** *See* Bersticker, A. C. 1355
- Hoffman, C. M.** *See* Thatcher, L. L. 1390
- Hofman, Walter.** *See* Burnham, W. L. 0013
- 1320 **Hofmann, Walter; Rantz, S. E.** Floods of December 1955-January 1956 in the Far Western States: Part 1, Description: U.S. Geol. Survey Water-Supply Paper 1650-A, p. A1-A156, July 1963.
- 1321 **Hofmann, Walter; Rantz, S. E.** Floods of December 1955-January 1956 in the Far Western States: Part 2, Streamflow data: U.S. Geol. Survey Water-Supply Paper 1650-B, 580 p., Mar. 1963.
- Hoinkes, H.** *See* Ambach, W. 0063
- 0950 **Holman, R. H. C.** A regional geochemical reconnaissance of stream sediments in the northern mainland of Nova Scotia, Canada, in Eight papers on regional geochemistry in Canada: Canada Geol. Survey Paper 63-23, p. 1-19, 1963.
- 0969 **Holmberg, G. D.** Status of ground-water storage in the Columbia River Basin in 1963, in Columbia Basin Water Forecast Comm. ann. mtg., 26th, Portland, Oregon, 1963, Proc.: Portland, Ore., U.S. Soil Conserv. Service, p. 17-20, July, 1963.
- 0951 **Holmes, C. R.** Tritium studies, Socorro Spring, in Guidebook of the Socorro Region, New Mexico, New Mexico Geol. Soc., 14th Field Conf., 1963: Socorro, New Mexico Bur. Mines and Mineral Resources, p. 152-154, 1963.
- Holt, C. L. R., Jr.** *See* Weeks, E. P. 1175
- 0685 **Holtan, H. N.; Overton, D. E.** Analyses and application of simple hydrographs: Jour. Hydrology [Amsterdam], v. 1, no. 3, p. 250-264, 1963.
- Hood, J. W.** *See* Leggat, E. R. 0480
- 0689 **Hood, J. W.** Saline ground water in the Roswell basin, Chaves and Eddy Counties, New Mexico, 1958-59: U.S. Geol. Survey Water-Supply Paper 1539-M, p. M1-M46, Apr. 1963.
- 0928 **Hood, J. W.** Tularosa and Hueco Bolcons, N. Mex. and Tex., in Thomas, H. E., and others, Effects of drought in basins of interior drainage: U.S. Geol. Survey Prof. Paper 372-E, p. E3-E6, Dec. 1963.
- 1256 **Hooper, Frank.** Aspects of biological transport of phosphorus-32 in streams, in Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm. Div. Tech. Inf. TID-7664, p. 247-259, July 1963.
- 0690 **Hopkins, H. T.** The effect of oilfield brines on the potable ground water in the Upper Big Pitman Creek basin, Kentucky: Kentucky Geol. Survey Rept. Inv. 4, Ser. X, 36 p., 1963.
- 0691 **Hopkins, W. B.** Geology and ground-water resources of the Scottsville area, Kentucky: U.S. Geol. Survey Water-Supply Paper 1528, 333 p., May 1963.
- 0692 **Hopkins, W. B.; Petri, L. R.** Geology and ground-water resources of the Lake Dakota Plain area, South Dakota: U.S. Geol. Survey Water-Supply Paper 1539-T, p. T1-T68, Apr. 1963.

- 0693 **Horn, D. L.; Schwab, G. O.** Evaluation of rational runoff coefficients for small agricultural watersheds: Am. Soc. Agr. Engineers Trans. (Gen. Ed.), v. 6, no. 3, p. 195-198, 201, 233, Nov. 1963.
- 0694 **Hornbeck, R. W.; Rouleau, W. T.; Osterle, Fletcher.** Laminar entry problem in porous tubes: Physics of Fluids, v. 6, no. 11, p. 1649-1654, Nov. 1963.
- Horr, C. A.** See Skougstad, M. W. 0853
- Horton, R. K.** See Cleary, E. J. 0229
- Hoster, Charles L.** See Kruger, Paul. 0393
- Hotchkiss, C. W.** See Grover, B. L. 0793
- 1277 **Hough, J. L.** Geological and sedimentary characteristics of the freshwater environment, in Great Lakes Research Conf., 6th, Ann Arbor, Michigan, 1963, Proc.: Michigan Univ. Great Lakes Research Div. Pub. 10, p. 134-139, 1963.
- 0695 **Howard, C. D. D.** Flow of clay-water suspensions: Am. Soc. Civil Engineers Proc. Paper 3641, Hydraulics Div. Jour., v. 89, no. HY-5, p. 89-97, Sept. 1963.
- Howell, D. T.** See Hall, W. A. 0684
- Howell, D. T.** See Hall, W. A. 1043
- Hoy, N. D.** See Kohout, F. A. 0386
- 0696 **Hoy, N. D.; Teel, J. R.** Hydrologic features of the Floridan aquifer in Seminole County, Florida: Florida Geol. Survey Map Ser. no. 5, one sheet, Jan. 1963.
- 1044 **Hsu, K. J.** Solubility of dolomite and composition of Florida ground waters: Jour. Hydrology [Amsterdam], v. 1, no. 4, p. 288-310, 1963.
- Hubbell, D. W.** See Sayre, W. W. 1487
- Hudson, J. W.** See Kapustka, S. F. 0354
- 0929 **Huff, F. A.; Changnon, S. A., Jr.** Drought climatology of Illinois: Illinois State Water Survey Bull. 50, 68 p., 1963.
- Huffman, G. C.** See Giroux, P. R. 0778
- 0697 **Hughes, L. S.; Shelby, Wanda.** Chemical composition of Texas surface waters, 1961: Texas Water Comm. Bull. 6304, 123 p., Sept. 1963.
- Hummel, R. A.** See Crummett, W. B. 0153
- 0698 **Humphreys, C. P., Jr.** Floods of 1959 in Mississippi: Mississippi Board Water Commissioners Bull. 63-8, 19 p., Aug. 1963.
- 1324 **Humphrys, C. R.** (editor) Michigan inland lake reference list: Michigan State Univ. Dept. Resource Devel., Agr. Expt. Sta. Water Bull. 13, 14 p., 1963.
- 0699 **Hundley, C. L.; Matulis, J. T.** Deep well disposal: Ground Water, v. 1, no. 2, p. 15-17, Apr. 1963.
- 0701 **Hunt, O. P.** Use of low-flow measurements to estimate flow-duration curves: Art. 110 in U.S. Geol. Survey Prof. Paper 475-C, p. C196-C197, Nov. 1963.
- 0700 **Huxel, C. J., Jr.; Petri, L. R.** Geology and ground-water resources of Stutsman County, North Dakota, Part II—Ground water basic data: North Dakota Geol. Survey Bull. 41, pt. 2, 335 p., 1963.

- 1327 **Idaho State University.** (Department of Geology, and Idaho Department of Highways.) Engineering geology symposium, 1st annual, Pocatello, Idaho, Apr. 8-10, 1963, Proceedings: Pocatello, Idaho State Univ. 75 p., 1963.
- 1359 **Illinois Department of Public Health.** (and Illinois Univ., Dept. Civil Engineering) Quality aspects of water distribution systems: Sanitary Eng. Conf., 5th, Urbana, Ill., Jan. 29-30, 1963, Proc., Illinois Univ. Eng. EXpt. Sta. Circ. 81, 95 p., Oct. 1963. [Individual papers not cited.]
- 1447 **Illinois Division of Waterways.** Interim report for flood control and drainage development, Embarrass River, Lawrence, Crawford, Richland, Jasper, Cumberland, Coles, Douglas, and Champaign Counties: Springfield, Ill. Div. Waterways, 36 p., apps. 28 p., maps bound separately 160 p., 1963.
- 0687 **Ineson, J.; Gray, D. A.** Electrical investigations of borehole fluids: Jour. Hydrology [Amsterdam], v. 1, no. 3, p. 204-218, 1963.
- 0311 **Ingols, R. S.; Wilroy, R. D.** Mechanism of manganese solution in lake waters: Am. Water Works Assoc. Jour., v. 55, no. 3, p. 282-290, Mar. 1963.
- Ingram, L. F.** See Cummins, R. S. 0155
- 0312 **Ingram, W. M.; Mackenthun, K. M.** Water pollution control, sewage treatment, water treatment, selected biological references: U.S. Public Health Service, Water Supply and Pollution Control Div. Pub. 1053 (U.S.P.H.S. Public Health Bibliography Ser. no. 8), 142 p., 1963.
- Inoue, Y.** See Iwai, S. 0972
- 0314 **International Atomic Energy Agency.** Disposal of radioactive wastes into fresh water—Report of an Ad Hoc panel of experts: Internat. Atomic Energy Agency Safety Ser. no. 10, 99 p., 1963.
- 0970 **International Atomic Energy Agency.** Radioisotopes in hydrology—Proceedings of the symposium on the application of radioisotopes in hydrology, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, 459 p., 1963. [Available in the U. S. from International Publications Inc., New York, N. Y.]
- 1398 **International Union.** (Pure and Appl. Chemistry) Re-use of water in industry—A contribution to the solution of effluent problems: London, Butterworths, 247 p., 1963.
- 1034 **Interstate Comm. Potomac River Basin.** Potomac River water quality network, compilation of data, water year 1963: Washington, D.C., Interstate Comm. Potomac River Basin. 40 p., 1963.
- 1438 **Interstate Comm. Potomac River Basin.** Water resources in the economic development of the Shenandoah Valley: Washington, D.C., Interstate Comm. Potomac River Basin 1963 Mtg., Proc., unpage, 1963.
- 0315 **Irrigation Engineering and Maintenance.** Irrigation survey: Irrig. Eng. and Maintenance, v. 13, no. 6, p. 11-31, Aug.-Sept. 1963.
- 0316 **Irrigation Engineering and Maintenance.** U.S. irrigated acreage: Irrig. Eng. and Maintenance, v. 13, no. 6, p. 9, Aug.-Sept. 1963.
- Irwin, J. H.** See Broom, M. E. 0277
- 0317 **Isbister, John.** Relation of fresh water to salt water at Centre Island, Nassau County, New York: Art. 226 in U.S. Geol. Survey Prof. Paper 450-E, p. E154-E156, Mar. 1963.
- Iseri, K. T.** See Mesnier, G. N. 0652

- 0318 **Isherwood, W. L.** Digital water-stage recorder, *in* Mesnier, G. N., and Iseri, K. T., compilers, Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, p. Z13-Z16, Nov. 1963.
- Iskander, Wilson.** *See* Rodis, H. G. 0734
- 0972 **Iwai, S.; Inoue, Y.** A method for the estimation of ground water stratification, *in* Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, p. 297-307, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- 0319 **Jackson, F. L.; Drause, F. P.** Diffusion-controlled buildup of surface active material at the air-water interface during evaporation: Jour. Phys. Chemistry, v. 67, no. 11, p. 2355-2360, Nov. 1963.
- 0320 **Jackson, R. D.** Temperature and soil-water diffusivity relations: Soil Sci. Soc. America Proc., v. 27, no. 4, p. 363-366, July-Aug. 1963.
- 0321 **Jackson, R. D.** Porosity and soil-water diffusivity relations: Soil Sci. Soc. America Proc., v. 27, no. 2, p. 123-126, Mar.-Apr. 1963.
- Jackson, R. D.** *See* Nakayama, F. S. 0456
- 0322 **Jacob, C. E.** Determining the permeability of water-table aquifers, *in* Bentall, Ray, compiler, Methods of determining permeability, transmissibility and drawdown: U.S. Geol. Survey Water-Supply Paper 1536-I, p. 245-271, Dec. 1963.
- 0323 **Jacob, C. E.** The recovery method for determining the coefficient of transmissibility, *in* Bentall, Ray, compiler, Methods of determining permeability, transmissibility and drawdown: U.S. Geol. Survey Water-Supply Paper 1536-I, p. 283-292, Dec. 1963.
- 0324 **Jacob, C. E.** Correction of drawdowns caused by a pumped well tapping less than the full thickness of an aquifer, *in* Bentall, Ray, compiler, Methods of determining permeability, transmissibility and drawdown: U.S. Geol. Survey Water-Supply Paper 1536-I, p. 272-282, Dec. 1963.
- 0325 **Jacobs, H. S.** Irrigation water quality charts for Kansas: Kansas Agr. Expt. Sta. Tech. Bull. 133, 16 p., 1963.
- James, D. M.** *See* Martin, J. C. 0528
- 0326 **Jarocki, Walenty.** Hydrologic and hydraulic computations of culverts and small bridges: Washington, D. C., U.S. Office Tech. Services OTS 60-21508, 160 p. (Translated from Polish), 1963.
- Jeffery, H. G.** *See* Bedinger, M. S. 1456
- 0327 **Jenkins, C. T.** Graphical multiple-regression analysis of aquifer tests: Art. 111 *in* U.S. Geol. Survey Prof. Paper 475-C, p. C198-C201, Nov. 1963.
- 0328 **Jenkins, C. T.** Field verification of computation of peak discharge through culverts: Art. 109 *in* U.S. Geol. Survey Prof. Paper 475-C, p. C194-C195, Nov. 1963.
- Jenkins, C. T.** *See* Moulder, E. A. 0427
- Jenkins, E. D.** *See* Cardwell, W. D. E. 0035
- Jennings, A. R.** *See* Schroeder, M. C. 1448

0329 **Jensen, C. R.; Kirkham, Don.** Oxygen-18 as a tracer in soil aeration studies: Soil Sci. Soc. America Proc., v. 27, no. 5, p. 499-501, Sept.-Oct. 1963.

1454 **Jensen, H. M.; Bradley, Edward.** Ground water in the vicinity of Hillsboro, Traill County, North Dakota: North Dakota Water Conserv. Comm., North Dakota Ground-Water Studies 55, 19 p., 1963.

0683 **Jensen, M. E.; Haise, H. R.** Estimating evapotranspiration from solar radiation: Am. Soc. Civil Engineers Proc. Paper 3737, Irrig. and Drainage Div. Jour., v. 89, no. IR 4, p. 15-41, Dec. 1963.

**Jessen, F. W.** See Lamont, Norman. 0288

0332 **Johansson, C. E.** Orientation of pebbles in running water—A laboratory study: Lund Studies in Geography, [Royal Univ. of Lund, Sweden] Ser. A. Phys. Geography No. 24, p. 85-112, 1963.

0334 **Johnson, A. I.** A field method for measurement of infiltration: U.S. Geol. Survey Water-Supply Paper 1544-F, p. F1-F27, Mar. 1963.

0335 **Johnson, A. I.; Prill, R. C.; Morris, D. A.** Specific yield—Column drainage and centrifuge moisture content: U.S. Geol. Survey Water-Supply Paper 1662-A, p. A1-A60, Nov. 1963.

**Johnson, A. I.** See Prill, R. C. 0955

1338 **Johnson, A. I.; Gnaedinger, J. P.** Bibliography, in Symposium on soil exploration, Atlantic City, New Jersey, 1963: Am. Soc. Testing and Materials Spec. Tech. Pub. 351, p. 137-155, 1963.

0333 **Johnson, Arthur.** Water power investigations of lakes in Alaska: Art. 48 in U.S. Geol. Survey Prof. Paper 475-B, p. B176-B178, June 1963.

**Johnson, Arthur.** See Weld, B. A. 1181

**Johnson, B. M.** See Brandt, H. L. 0268

0336 **Johnson, C. J.** Management of water resources in the Potomac River Basin: Water Pollution Control Federation Jour., v. 35, no. 10, p. 1318-1324, Oct. 1963.

0337 **Johnson, C. R.; Greenkorn, R. A.** Description of gross reservoir heterogeneity by correlation of lithologic and fluid properties from core samples: Internat. Assoc. Sci. Hydrology Bull., v. 8, no. 3, p. 52-63, Sept. 1963.

0338 **Johnson, E. A.** Surface water, in United States National report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 562-568, June 1963.

0339 **Johnson, E. C.** San Diego County land and water use survey, 1958: California Dept. Water Resources Bull. 102, 55 p., app. A-C, Aug. 1963.

0340 **Johnson, E. C.** Desert areas of southeastern California, land and water use survey, 1958: California Dept. of Water Resources Bull. 101, 74 p., app. A-D, Jan. 1963.

**Johnson, H. P.** See Ligon, J. T. 0494

**Johnson, J. D.** See Weiss, C. M. 1393

- 1437 **Johnson, J. W.** Bulletins and reports of California State water agencies, an annotated listing: California Univ. Water Resources Center Archives, Archives Ser. Rept. 15, 157 p., Oct. 1963.
- Johnson, L. C.** *See* Replogle, J. A. 0719
- 0342 **Johnson, P. M.; Pollock, S. J.; Weist, W. G., Jr.** Potomac River Basin Report, Appendix G—Ground-water resources of the Potomac River Basin: Baltimore, U.S. Army Engineer Dist., Baltimore, Basin Studies Branch, v. 7, 114 p., 1963. [Originally released in 1962]
- Johnson, P. W.** *See* Brown, S. G. 1478
- 1369 **Johnson, T. R.** Colorado River water for Arizona, *in* Arizona Water Resources Comm., Water conservation from mountains to deserts: Arizona Watershed Symposium, 7th, Phoenix, Ariz., 1963, Proc., p. 9-11, 1963.
- 0343 **Johnson, W. R.; Letey, John; Pillsbury, A. F.** Hydraulic conductivity values compared using (1) ponded water theory and (2) auger hole method: Am. Soc. Agr. Engineers Trans. (Gen. Ed.), v. 6, no. 3, p. 249-250, Nov. 1963.
- 0344 **Johnston, P. M.; Otton, E. G.** Availability of ground water for urban and industrial development in upper Montgomery County, Maryland: Baltimore, Maryland-Natl. Capitol Park and Planning Comm., and Maryland Dept. Geology, Mines and Water Resources., 47 p., Apr. 1963.
- Johnston, W. R.** *See* Perrier, E. R. 0604
- 0345 **Jones, D. S., Jr.** Desirable features of water right law: Am. Soc. Civil Engineers Proc. Paper 3711, Irrig. and Drainage Div. Jour., v. 89, no. IR4, p. 1-6, 1963.
- Jones, J. B.** *See* Logan, Earl, Jr. 0501
- 0346 **Jones, J. F.** Aquifer-testing procedures and other information used in evaluating groundwater supplies in Alberta: Alberta Research Council Prelim. Rept. 63-1, 35 p., 1963.
- Jones, J. F.** *See* LeBreton, E. G. 1379
- 0347 **Jones, J. R.; Akin, P. D.; Schneider, Robert.** Geology and ground-water conditions in the southern part of Camp Ripley Military Reservation, Morrison County, Minnesota: U.S. Geol. Survey Water-Supply Paper 1669-A, p. A1-A32, 1963.
- 0348 **Jones, P. B.** (and others) The development of the science of hydrology: Texas Water Comm. Circ. 63-03, 35 p., April 1963.
- 0349 **Jopling, A. V.** Hydraulic studies on the origin of bedding: Sedimentology, v. 2, no. 2, p. 115-121, June 1963.
- 0350 **Jopling, A. V.** Effect of base-level changes on bedding development in a laboratory flume: Art. 56 *in* U.S. Geol. Survey Prof. Paper 475-B, p. B203-B204, June 1963.
- Jordan, D. G.** *See* Watkins, F. A., Jr. 1159
- Jordan, D. G.** *See* Watkins, F. A., Jr. 1495
- 0351 **Joyner, B. F.** Iron in Georgia ground water: Georgia Mineral Newsletter, v. 16, no. 3-4, p. 73-74, Fall-Winter 1963.
- 0352 **Kaitera, Pentti.** Niinivaara's method for estimating the evaporation from watershed areas: Internat. Assoc. Sci. Hydrology Pub. 62, p. 213-220, 1963.

- 0353 **Kansas Academy of Science.** Conference on fresh water pollution hazards: Kansas Acad. Sci. Trans., v. 66, no. 1, p. 1-48, Spring 1963.
- Kantrowitz, I. H.** See Pluhowski, E. J. 0614
- 0354 **Kapustka, S. F.; Harvey, E. J.; Hudson, J. W.** Water resources investigations during fiscal year 1963, Jackson County, Mississippi: Mississippi Board Water Commissioners Bull. 63-7, 11 p., Aug. 1963.
- 0355 **Karr, W. V.** Organic sediments in river beds: Ground Water, v. 1, no. 3, p. 12, July 1963.
- 1465 **Kase, K. A.** (compiler) Conversion of saline water, a bibliography of literature resulting from the activities sponsored by the Office of Saline Water: U.S. Office of Saline Water Research and Devel. Prog. Rept. 82, 59 p., Oct. 1963.
- Kaser, Paul.** See Klein, Marian. 0378
- 0357 **Katlafsky, Bernard; Keller, R. E.** Attenuated total reflectance infrared analysis of aqueous solutions: Anal. Chemistry, v. 35, no. 11, p. 1665-1670, Oct. 1963.
- 1416 **Kato, Massao.** (and others) A study in river engineering based on the results of field measurements of flow velocities with radioisotopes in the Sorachi River, Japan, in Radioisotopes in hydrology, Proc. of a symposium, Tokyo, 1963: Internat. Atomic Energy Agency, Proc. Ser. 71, p. 89-110, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- 0358 **Kaufman, A. N.** Statistical derivation of hydrodynamics for a Coulomb System: Physics of Fluids, v. 6, no. 11, p. 1574-1578, Nov. 1963.
- 1252 **Kaufman, W. J.; Klingerman, P. C.** Nature and disposition of sediment sorbed radionuclides entering San Francisco Bay, in Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm., Div. Tech. Inf. TID-7664, p. 149-159, July 1963.
- 1352 **Kaufman, W. J.** An appraisal of the distribution coefficient for estimating underground movement of radioisotopes: Palo Alto, Calif., Hazleton-Nuclear Science Corp., 23 p., Apr. 1963.
- Kawano, R. Y.** See Maughan, W. D. 0538
- 1266 **Kehr, W. Q.; Poston, H. W.** Interesting aspects of the comprehensive water quality study of Lake Michigan, in Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112, (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 203-210, 1963.
- Kehr, W. Q.** See Poston, H. W. 1279
- 0360 **Keijman, J. Q.** Instruments for the determination of the vertical transport of water vapour—An analysis of the results obtained by this method: Internat. Assoc. Sci. Hydrology Pub. 62, p. 232-236, 1963.
- Keller, F. J.** See Wark, J. W. 1152
- Keller, F. J.** See Wark, J. W. 1153
- Keller, R. E.** See Katlafsky, Bernard. 0357
- 0361 **Kelley, W. P.** Use of saline irrigation water: Soil Sci., v. 95, no. 6, p. 385-391, June 1963.
- Kellogg, R. W.** See Bell, E. A. 0106

- 0678 **Kelly, L. L.** Electronic computers in watershed research: Am. Soc. Civil Engineers Proc. Paper 3628, Irrig. and Drainage Div. Jour., v. 89, no. IR 3, p. 37-43, Sept. 1963.
- Kelso, F. S.** See Lishka, R. J. 0496
- 0363 **Kemper, W. D.; Evans, N. A.** Movement of water as effected by free energy and pressure gradients. III. Restriction of solutes by membranes: Soil Sci. Soc. America Proc., v. 27, no. 5, p. 485-490, Sept.-Oct. 1963.
- Kempton, J. P.** See McGinnis, L. D. 0443
- Kendall, H. A.** See Crane, F. E. 0144
- 0681 **Kennedy, E. J.** Streamflow records by digital computer: Am. Soc. Civil Engineers Proc. Paper 3625, Irrig. and Drainage Div. Jour., v. 89, no. IR 3, p. 29-36, Sept. 1963.
- 0365 **Kennedy, J. F.** The mechanics of dunes and antidunes in erodible-bed channels: Jour. Fluid Mechanics, v. 16, pt. 4, p. 521-544, 1963.
- 1249 **Kennedy, Vance.** Mineralogy and exchange capacity of modern fluvial sediments, in Kornegay, B. H., and others, editors. Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm., Div. Tech. Inf. TID-7664, p. 71-90, July 1963.
- 0366 **Kenner, W. E.; Crooks, J. W.** Surface-water resources of St. Johns, Flagler, and Putnam Counties, Florida: Florida Geol. Survey Inf. Circ. 39, 44 p., 1963.
- 0367 **Kern, M. K.** Jasper County ground-water resources, in DeVries, D. A., and others, Jasper County mineral resources: Mississippi Geol., Econ., and Topog. Survey Bull. 95, p. 69-81, 1963.
- Kilburn, Chabot.** See Mundorff, M. J. 0433
- Kilburn, Chabot.** See West, S. W. 1182
- Kilburn, Chabot.** See Whitman, H. M. 1443
- Kim, K. Y.** See VanWazer, J. R. 1113
- 0368 **Kimmel, G. E.** Contamination of ground water by sea-water intrusion along Puget Sound, Washington, an area having abundant precipitation: Art. 50 in U.S. Geol. Survey Prof. Paper 475-B, p. B182-B185, June 1963.
- 0369 **King, H. W.; Brater, E. F.** Handbook of hydraulics—for the solution of hydrostatic and fluid-flow problems, 5th ed.: New York, McGraw-Hill, 1373 p., 1963.
- 0370 **Kingdon, K. H.** Enhancement of the evaporation of water by foreign molecules adsorbed on the surface: Jour. Phys. Chemistry, v. 67, no. 12, p. 2732-2734, Dec. 1963.
- 0371 **Kingery, W. D.** (editor) Ice and snow—properties, processes, applications, Proceedings of a conference, Massachusetts Inst. Technology, Feb. 12-16, 1962: Cambridge, M.I.T. Press, 684 p., 1963.
- 0372 **Kinney, J. E.** Our fictitious water famine: Am. City, v. 78, no. 4, p. 142, 147, 149-150, Apr. 1963.
- 0373 **Kinnison, H. B.; Seeva, J. E.** Effects of hydraulic and geologic factors on streamflow of the Yakima River basin, Washington: U.S. Geol. Survey Water-Supply Paper 1595, 134 p., 1963, [Jan. 1964].

- Kirkham, D.** *See* Benoit, G. R. 0109
- Kirkham, Don.** *See* Jensen, C. R. 0329
- Kirkham, Don.** *See* Ligon, J. T. 0494
- 0374 **Kirkpatrick, G. A.; Price, W. E., Jr.; Madison, R. A.** Water resources of eastern Kentucky; progress report: Kentucky Geol. Survey Rept. Inv. Ser. X, no. 5, 67 p., 1963.
- 0376 **Kister, L. R.; Hatchett, J. L.** Geohydrologic data in the Navajo and Hopi Indian Reservations, Arizona, New Mexico, and Utah. Part 11, Selected chemical analyses of the ground water: Arizona State Land Dept. Water Resources Rept. 12-B, 58 p., May 1963.
- Kister, L. R.** *See* Brown, S. G. 1478
- 0375 **Kister, L. R., Jr.; Mundorff, J. C.** Sedimentation and chemical quality of water in Salt Creek basin, Nebraska: U.S. Geol. Survey Water-Supply Paper 1669-H, p. H1-H47, Nov. 1963.
- 0377 **Klaer, F. H., Jr.** Bacteriological and chemical factors in induced infiltration: Ground Water, v. 1, no. 1, p. 38-43, Jan. 1963.
- **Klein, Howard.** *See* Sherwood, C. B. 0888
- Klein, Howard.** *See* Sherwood, C. B. 0889
- 0378 **Klein, Marian; Kaser, Paul.** A statistical analysis of ground-water levels in twenty selected observation wells in Ohio: Ohio Div. Water Tech. Rept. 5, 124 p., 1963.
- Klingerman, P. C.** *See* Kaufman, W. J. 1252
- 0379 **Klug, M. L.** Ground water in Texas: Am. Soc. Civil Engineers Proc. Paper 3519, Hydraulics Div. Jour., v. 89, no. HY3, p. 153-165, May 1963.
- Klug, M. L.** *See* Moulder, E. A. 0426
- Klute, A.** *See* Bruce, R. R. 0006
- 0380 **Klute, A.** Temperature effects on soil water. *in* United States National report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 571-572, June 1963.
- 0381 **Knapp, J. W.; Schaake, J. C., Jr.; Viessman, Warren, Jr.** Measuring rainfall and runoff at storm-water inlets: Am. Soc. Civil Engineers Proc. Paper 3644, Hydraulics Div. Jour., v. 89, no. HY5, p. 99-115, Sept. 1963.
- 1284 **Kneese, A. V.** Water resources problems of national scope: Texas A and M Univ., Water Resources Inst., Water for Texas Conf., 8th ann., College Station, Texas, 1963, Proc., p. 7-13, 1963.
- 1424 **Knisel, W. G., Jr.** Baseflow recession analysis for comparison of drainage basins and geology: Jour. Geophys. Research, v. 68, no. 12, p. 3649-3653, June 15, 1963.
- 0382 **Knowles, D. B.; Reade, H. L., Jr.; Scott, J. C.** Geology and ground-water resources of Montgomery County, Alabama, *with special reference to* The Montgomery area: U.S. Geol. Survey Water-Supply Paper 1606, 76 p., 1963, [Feb. 1964].
- 0383 **Knowles, D. B.; Drescher, W. J.; LeRoux, E. F.** Ground-water conditions at Argonne National Laboratory, Illinois, 1948-60: U.S. Geol. Survey Water-Supply Paper 1669-0, p. 01-040, Nov. 1963.

- Knowles, D. B.** *See* Ferris, J. G. 0639
- Knudsen, C. N.** *See* Reisenauer, A. E. 1331
- 1413 **Knutsson, G.; Ljunggren, K.; Forsberg, H. G.** Field and laboratory tests of Chromium-51-EDTA and tritium water as a double tracer for ground-water flow, in Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, p. 347-363. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- 0960 **Kobayashi, M.; Nukazawa, A.** Measurement of river dilution and flow by means of radioactive tracers and activation analysis, in Radioisotopes in hydrology, Proceedings of a symposium, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, p. 433-449, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- 0384 **Koberg, G. E.; Cruse, R. R.; Shrewsbury, C. L.** Evaporation control research, 1959-1960: U.S. Geol. Survey Water-Supply Paper 1692, 55 p., Mar. 1963.
- Kodaira, K.** *See* Yamagata, N. 1412
- 0385 **Koenig, Louis.** Economics of ground water utilization: Am. Water Works Assoc. Jour., v. 55, no. 1, p. 59-66, Jan. 1963.
- 0386 **Kohout, F. A.; Hoy, N. D.** Some aspects of sampling salty ground water in coastal aquifers: Ground Water, v. 1, no. 1, p. 28-32, 43, Jan. 1963.
- 0387 **Kolb, C. R.** Sediments forming the bed and banks of the lower Mississippi River and the effect on river migration: Sedimentology, v. 2, no. 3, p. 227-234, Sept. 1963.
- Kondo, O.** *See* Ariizumi, A. 1411
- Kondo, Osamu.** *See* Ariizumi, Akira. 0963
- 1343 **Koopman, F. C.** An improved water-stage recorder for hydraulic drill holes, in Symposium on Exploration Drilling, 11th, Golden, Colorado, 1963, Papers: Colorado School Mines Quart., v. 58, no. 4, p. 105-112, Oct. 1963.
- 1246 **Kornegay, B. H.** (and others) Transport of radionuclides in fresh water systems—Report of a working conference held at University of Texas, Jan. 30-Feb. 1, 1963: U.S. Atomic Energy Comm., Div. Tech. Inf. TID-7664, 406 p., July 1963.
- 0388 **Koval, E. J.** A method for predicting the performance of unstable miscible displacement in heterogeneous media: Soc. Petroleum Engineers Jour., v. 3, no. 2, p. 145-163, June 1963.
- 1243 **Kramer, H. A.; Corley, J. P.** Use of Lake Roosevelt storage to lower river temperatures, in Western Snow Conference, 31st ann. mtg., Yosemite Nat., Park, Calif., 1963, Proc.: Tacoma, Wash., p. 28-37, 1963.
- Kramer, H. P.** *See* Lishka, R. J. 0496
- 0389 **Krammes, J. S.; Hellmers, Henry.** Tests of chemical treatments to reduce erosion from burned watersheds: Jour. Geophys. Research, v. 68, no. 12, p. 3667-3672, June 15, 1963.
- 1372 **Krammes, J. S.; Rice, R. M.** Effect of fire on the San Dimas Experimental Forest, in Arizona Water Resources Comm., Water conservation from mountains to deserts: Arizona Watershed Symposium, 7th, Phoenix, Ariz., 1963, Proc. p. 31-34, 1963.

- 0390 **Krieger, R. A.** The chemistry of saline waters: *Ground Water*, v. 1, no. 4, p. 7-12, Oct. 1963.
- Krieger, R. A.** *See* Wiitala, S. W. 1190
- 0391 **Krinsley, D. B.** Influence of snow cover in frost penetration: *Art. 38 in U.S. Geol. Survey Prof. Paper 475-B*, p. B144-B147, June 1963.
- Krogman, K. K.** *See* Hobbs, E. H. 0946
- 0392 **Krombach, H.; Barthel, J.** Investigation of a small watercourse accidentally polluted by phenol compounds: *Internat. Jour. Air and Water Pollution*, v. 7, no. 1, p. 39-46, Jan. 1963.
- 0393 **Kruger, Paul; Hosler, Charles L.**  $\text{Sr}^{90}$  concentration in precipitation from convective showers: *Jour. Appl. Meteorology*, v. 2, no. 3, p. 379-389, June 1963.
- 1257 **Krumholz, L. A.** Biological transfer of natural and fallout radionuclides in streams, *in Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm. Div. Tech. Inf. TID-7664*, p. 261-267, July 1963.
- Kulp, W. K.** *See* Bell, E. A. 0106
- Kunkel, Fred.** *See* Burnham, W. L. 0013
- 0394 **Kunkel, Fred.** Hydrologic and geologic reconnaissance of Pinto basin, Joshua Tree National Monument, Riverside County, California: *U.S. Geol. Survey Water-Supply Paper 1475-O*, p. 537-561, Feb. 1963.
- Kuroda, P. K.** *See* Menon, M. P. 0650
- 0395 **Kuznetsov, S. I. (and others)** Introduction to geological microbiology: *New York, McGraw-Hill Book Co.*, 252 p., 1963.
- Kwon, Byung.** *See* Weiss, C. M. 1393
- 0396 **Lacy, J.** Semi-automatic determination of calcium and magnesium hardness in water: *Talanta*, v. 10, no. 9, p. 1031-1040, Sept. 1963.
- Lakin, H. W.** *See* Theobald, P. K., Jr. 0961
- 0283 **Lamar, W. L.; Goerlitz, D. F.** Characterization of carboxylic acids in unpolluted streams by gas chromatography: *Am. Water Works Assoc. Jour.*, v. 55, no. 6, p. 797-802, June 1963.
- 0284 **Lamb, H. H.** On the nature of certain climatic epochs which differed from the modern (1900-39) normal, *in Changes of climate: UNESCO Arid Zone Research Ser.*, v. 20, p. 125-150, 1963.
- Lamb, J. C., III.** *See* Okun, D. A. 1268
- Lambert, J. L.** *See* Zitomer, Fred. 1231
- Lambert, T. W.** *See* Brown, R. F. 0280
- Lambert, T. W.** *See* Brown, R. F. 0281
- 0285 **Lambert, T. W.; Brown, R. F.** Availability of ground water in Adair, Casey, Clinton, Cumberland, Pulaski, Russell, Taylor, and Wayne Counties, Kentucky: *U.S. Geol. Survey Hydrol. Inv. Atlas HA-35*, two sheets, Nov. 1963.
- 0286 **Lambert, T. W.; Brown, R. F.** Availability of ground water in Caldwell, Christian, Crittenden, Livingston, Lyon, Todd, and Trigg Counties, Kentucky: *U.S. Geol. Survey Hydrol. Inv. Atlas HA-34*, three sheets, Feb. 1963.

- 0287 **LaMer, V. K.; Aylmore, L. A. G.; Healy, T. W.** The ideal surface behavior of mixed monolayers of long-chain n-paraffinic alcohols: *Jour. Phys. Chemistry*, v. 67, no. 12, p. 2739-2745, Dec. 1963.
- 0288 **Lamont, Norman; Jessen, F. W.** The effects of existing fractures in rocks on the extension of hydraulic fractures: *Jour. Petroleum Technology*, v. 15, no. 2, p. 203-209, Feb. 1963.
- 0289 **LaMoreaux, P. E.** Ground water, *in* United States National report to IUGG 1960-1963: *Am. Geophys. Union Trans.*, v. 44, no. 2, p. 569-571, June 1963.
- 0290 **Landgren, N. E.; Timmons, J. F.; Anderson, J. C.** Watershed protection through farm planning: *Jour. Soil and Water Conserv.*, v. 18, no. 1, p. 3-7, Jan.-Feb. 1963.  
**Lane, C. W.** *See* Stermitz, Frank. 1001
- 0291 **Lane, D. W.** Cross-stratification in San Bernard River, Texas, point bar deposit: *Jour. Sed. Petrology*, v. 33, no. 2, p. 350-354, June 1963.  
**Lane, R. W.** *See* Berg, Brian. 0115
- 0292 **Lang, S. M.** Drawdown patterns in aquifers having a straight-line boundary, *in* Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C56-C68, 1963.
- 0293 **Lang, S. M.; Rhodehamel, E. C.** Aquifer test at a site on the Mullica River in the Wharton Tract, southern New Jersey: *Internat. Assoc. Sci. Hydrology Bull.*, v. 8, no. 2, p. 31-38, June 1963.
- 0294 **Langbein, W. B.** The hydraulic geometry of a shallow estuary: *Internat. Assoc. Sci. Hydrology Bull.*, v. 8, no. 3, p. 84-94, Sept. 1963.
- 0295 **Lange, A. L.** Planes of repose in caves: *Cave Notes*, v. 5, no. 6, p. 41-48, Nov.-Dec. 1963.
- 0296 **Langer, Elinor.** A view from the bridge—Politics no picnic on banks of pollution; strong federal agency is likely: *Science*, v. 142, no. 3592, p. 566-567, Nov. 1, 1963.  
**Langford, R. H.** *See* Robinove, C. J. 0727
- 0297 **Langway, C. C., Jr.** Sampling for extra-terrestrial dust on the Greenland ice sheet: *Internat. Assoc. Sci. Hydrology Pub.* 61, p. 189-198, 1963.  
**LaRocque, A.** *See* Weber, J. N. 1172
- 0298 **LaRocque, G. A., Jr.** Graphic method for plotting aquifer-test data, *in* Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C4-C9, 1963.
- 1453 **LaRocque, G. A., Jr.; Swenson, H. A.; Greenman, D. W.** Ground water in the Crosby-Mohall area, North Dakota: North Dakota Water Conserv. Comm., North Dakota Ground-Water Studies 54, 57 p., 1963.  
**Larsen, T. E.** *See* Berg, Brian. 0115
- 0300 **Larsen, T. E.** Mineral content of public ground-water supplies in Illinois: Illinois State Water Survey Circ. 90, 28 p., 1963.  
**Larson, T. E.** *See* Dunn, D. F. 0192
- 0301 **Latta, B. F.** Fresh water pollution hazards related to the petroleum industry in Kansas: *Kansas Acad. Sci. Trans.*, v. 66, no. 1, p. 25-33, Spring 1963.  
**Lauer, G. J.** *See* Dorris, T. C. 0186

- 0302 **Lauman, R. H.** Large diameter hole drilling: *Ground Water*, v. 1, no. 2, p. 9-10, 14, Apr. 1963.
- 0303 **Laursen, E. M.** An analysis of relief bridge scour: *Am. Soc. Civil Engineers Proc. Paper 3516, Hydraulics Div. Jour.*, v. 89, no. HY3, p. 93-118, May 1963.
- Laursen, E. M.** *See* Lewis, D. D. 0489
- Laursen, E. M.** *See* Zernal, G. A. 1230
- 0304 **Lawless, G. P.; MacGillivray, N. A.; Nixon, P. R.** Soil moisture interface effects upon readings of neutron moisture probes: *Soil Sci. Soc. America Proc.*, v. 27, no. 5, p. 502-507, Sept.-Oct. 1963.
- Lawless, G. P.** *See* Nixon, P. R. 0556
- 0305 **Lawrence, R. E.; Hess, R. H.** Wichita's past, present, and future water supply: *Am. Water Works Assoc. Jour.*, v. 55, no. 8, p. 1081-1092, Aug. 1963.
- 0306 **Leach, S. D.; Sherwood, C. B.** Hydrologic studies in the Snake Creek Canal area, Dade County, Florida: *Florida Geol. Survey Rept. Inv.* 24, pt. 3, 33 p., 1963.
- 1417 **Lean, G. H.; Crickmore, M. J.** Methods for measuring sand transport using radioactive tracers, in *Radioisotopes in hydrology*, Proc. of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71 p. 111-131, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- 0307 **LeBreton, E. G.** Groundwater geology and hydrology of east-central Alberta: *Alberta Research Council Bull.* 13, 64 p., 1963.
- 0308 **LeBreton, E. G.** Ground water geology and hydrology of the Andrew area, Alberta, in *Early contributions to the ground water hydrology of Alberta*: *Alberta Research Council Bull.* 12, p. 13-24, 1963.
- 0477 **LeBreton, E. G.** Ground water geology and hydrology of the Lloydminster area, Alberta, in *Early contributions to the ground water hydrology of Alberta*: *Alberta Research Council Bull.* 12, p. 25-37, 1963.
- 1379 **LeBreton, E. G.; Jones, J. F.** A regional picture of the groundwater chemistry in particular aquifers of the western plains, in *Canada National Research Council, Groundwater. Proceedings of Hydrology Symposium No. 3*, Calgary, Alberta, 1962: Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 207-250, 1963.
- 0478 **Leclerc, E.** Self-purification of fresh water streams as affected by temperature and by the content of oxygen, nitrogen and other substances: *Internat. Jour. Air and Water Pollution*, v. 7, nos. 4-5, p. 357-365, June 1963.
- 0479 **Lee, Richard.** Evaluation of solar irradiation as a climatic parameter of mountain watersheds: *Colorado State Univ., Hydrology Paper No. 2*, 1963.
- Leeson, H. W.** *See* Hansen, R. G. 0808
- 0480 **Leggat, E. R.; Lowry, M. E.; Hood, J. W.** Ground-water resources of the lower Mesilla Valley, Texas and New Mexico: *U.S. Geol. Survey Water-Supply Paper 1669-AA*, p. AA1-AA49, Feb. 1963.
- 0481 **Lehr, J. H.** Ground water--flow toward an effluent stream: *Science*, v. 140, no. 3573, p. 1318-1320, June 21, 1963.
- 0482 **Lehr, J. H.** Ground-water flow models simulating subsurface conditions: *Jour. Geol. Education*, v. 11, no. 4, p. 124-132, Dec. 1963.

- 0483 **Lehr, J. H.; Wright, J. J.** Development of hydraulic models analogous to subsurface geologic conditions for studying and demonstrating the characteristics of ground water movement: Tucson, Arizona Univ., Dept. Geology, Final rept. to National Science Foundation, 89 p., July 1963.
- 1428 **Lehr, J. H.** Model analysis of water table drawdown surrounding pumping wells: Jour. Soil and Water Conserv., v. 18, no. 5, p. 205-207, Sept.-Oct. 1963.
- 0484 **Lembke, W. D.; Delleur, J. W.; Monke, E. J.** Model study of flow in steep tile drains: Am. Soc. Agr. Engineers Trans. (Gen. Ed.), v. 6, no. 2, p. 142-144, Sept. 1963.
- Lendo, A. C.** *See* McCall, J. E. 0440
- 0485 **Lennox, D. H.** Geophysical prospecting for groundwater in Alberta, in Early contributions to the ground-water hydrology of Alberta: Alberta Research Council Bull. 12, p. 38-56, 1963.
- 1380 **Lennox, D. H.** Geophysical methods of locating aquifers in the prairies, in Canada National Research Council, Groundwater, Proceedings of Hydrology Symposium No. 3, Calgary, Alberta, 1962: Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 251-300, 1963.
- Leopold, E. B.** *See* Leopold, L. B. 1307
- Leopold, L. B.** *See* Myrick, R. M. 0439
- 0486 **Leopold, L. B.** Lands of little water, *Preface* in Hodge, Carle, ed., Aridity and man: Am. Assoc. Adv. Sci. Pub. 74, p. ix-xii., 1963.
- Leopold, L. B.** *See* Miller, J. P. 0666
- 1307 **Leopold, L. B.; Leopold, E. B.; Wendorf, F.** Some climatic indicators in the period A.D. 1200-1400 in New Mexico, in Changes of climate: UNESCO Arid Zone Research Ser., v. 20, p. 265-270, 1963.
- LeRoux, E. F.** *See* Knowles, D. B. 0383
- 0487 **LeRoux, E. F.** Geology and ground-water resources of Rock County, Wisconsin: U.S. Geol. Survey Water-Supply Paper 1619-X, p. X1-X50, Dec. 1963.
- Leteij, John.** *See* Johnson, W. R. 0343
- 0488 **Lettau, H. H.; Dalrymple, P. C.; Wollaston, S. H.** South Pole surface energy budget: Internat. Assoc. Sci. Hydrology Pub. 61, p. 18-23, 1963.
- Leve, G. W.** *See* Bermes, B. J. 0118
- Leve, G. W.** *See* Bermes, B. J. 0119
- 0489 **Lewis, D. D.; Laursen, E. M.; Beard, A. H., Jr.** Water for Tucson: Am. Soc. Civil Engineers, Southern Arizona Branch Rept. 1, 13 p., 1963.
- 0490 **Lewis, D. D.** Desert floods--A report on southern Arizona floods of September, 1962: Arizona State Land Dept. Water Resources Rept. 13, 30 p., Apr., 1963.
- Liakopoulos, A.** *See* Christopoulos, C. 1499
- 0492 **Libby, F. J.; Nixon, P. R.** A portable lysimeter adaptable to a wide range of site situations: Internat. Assoc. Sci. Hydrology Pub. 62, p. 153-158, 1963.
- 0491 **Libby, W. F.** Moratorium tritium geophysics: Jour. Geophys. Research, v. 68, no. 15, p. 4485-4494, Aug. 1, 1963.

- Lichtenberg, J. J.** See Breidenbach, A. W. 1340
- Lichty, R. W.** See Schumm, S. A. 0922
- Lieber, Maxim.** See Perlmutter, N. M. 0603
- 0493 **Liesch, B. A.; Price, C. E.; Walters, K. L.** Geology and ground-water resources of northwestern King County, Washington: Washington State Div. Water Resources. Water Supply Bull. 20, 241 p., 1963.
- 0494 **Ligon, J. T.; Johnson, H. P.; Kirkham, Don.** Glass bead-glycerol model for studying falling water table between open ditch drains: Am. Soc. Agr. Engineers Trans. (Gen. Ed.), v. 6, no. 1, p. 61-64, June 1963.
- 0495 **Linck, C. J.** Geophysics as an aid to the small water well contractor: Ground Water, v. 1, no. 1, p. 33-37, Jan. 1963.
- Linsley, R. K.** See Crawford, N. H. 0145
- Linville, A.** See Anderson, D. M. 0049
- Linville, A.** See Anderson, D. M. 1467
- 0496 **Lishka, R. J.; Kelso, F. S.; Kramer, H. P.** Evaluation of methods for determination of minerals in water: Am. Water Works Assoc. Jour., v. 55, no. 5, p. 647-656, May 1963.
- 1381 **Lissey, A.** Hydrogeology of the Regina aquifer, in Canada National Research Council, Groundwater, Proceedings of Hydrology Symposium No. 3, Calgary, Alberta, 1962; Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 303-333, 1963.
- Lister, H.** See Caisley, B. 0019
- 0497 **Livingstone, D. A.** Chemical composition of rivers and lakes, Chapter G of Data of geochemistry, 6th ed., Michael Fleischer, Technical Editor: U.S. Geol. Survey Prof. Paper 440-G, p. A1-A64, 1963.
- Ljunggren, K.** See Knutsson, G. 1413
- 0498 **Loeltz, O. J.** Ground-water conditions in the vicinity of Lake Mead Basin, Las Vegas Valley, Nevada: U.S. Geol. Survey Water-Supply Paper 1669-Q, p. Q1-Q17, Sept. 1963.
- Loeltz, O. J.** See Sinclair, W. C. 0895
- 0499 **Lofgren, B. E.** Land subsidence in the Arvin-Maricopa area, San Joaquin Valley, California: Art. 47 in U.S. Geol. Survey Prof. Paper 475-B, p. B171-B175, June 1963.
- 0500 **Lofting, E. M.; McGauhey, P. H.** Economic evaluation of water, Part 3. An interindustry analysis of the California water economy: California Univ. Water Resources Center Contr. 67, 73 p., Jan. 1963.
- 0501 **Logan, Earl, Jr.; Jones, J. B.** Flow in a pipe following an abrupt increase in surface roughness: Am. Soc. Mechanical Engineers Trans., Ser. D., Jour. Basic Eng., v. 85, no. 1, p. 35-40, Mar. 1963.
- 0502 **Lohman, S. W.** Method for determination of the coefficient of storage from straight-line plots without extrapolation, in Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C33-C37, 1963.
- Lohnes, R. A.** See Pedersen, D. E. 0598

- 0503 **Long, A. T.** Ground-water geology of Edwards County, Texas: U.S. Geol. Survey Water-Supply Paper 1619-J, p. J1-J29, June 1963.
- Long, A. T.** *See* Baker, E. T., Jr. 1457
- 0504 **Long, F. L.** (and others) Soil moisture characteristics of some lower coastal plain soils: U.S. Agr. Research Service ARS 41-82, 22 p., 1963.
- Long, R. A.** *See* Cardwell, G. T. 0034
- 1335 **Longenbaugh, R. A.** Ground-water resources in northeastern Colorado, in Katich, P. J. and Bolyard, D. W., editors, Guidebook to the geology of the northern Denver Basin and adjacent uplifts: Rocky Mountain Assoc. Geologists Field Conf., 14th, Colorado, Wyoming, Nebraska, and South Dakota, 1963. Guidebook, p. 205-207, 1963.
- 0505 **Lord, G. R.** A conservation authority and water management: Jour. Soil and Water Conserv., v. 18, no. 1, p. 28-30, Jan.-Feb. 1963.
- 0506 **Lorenz, E. N.** The predictability of hydrodynamic flow: New York Acad. Sci. Trans., Ser. II, v. 25, no. 4, p. 409-432, Feb. 1963.
- Lott, G. A.** *See* Myers, V. A. 0438
- Low, P. F.** *See* Oster, J. D. 0578
- Low, P. F.** *See* Miller, R. J. 0667
- Lowry, M. E.** *See* Leggat, E. R. 0480
- Lucas, H. F., Jr.** *See* Emrich, G. H. 0220
- Lunin, J.** *See* Batchelder, A. R. 0100
- 0507 **Lunin, Jesse.** An annotated bibliography on freezing and thawing of soils: U.S. Agr. Research Service, ARS 41-74, 30 p., June 1963.
- 1299 **Lunt, O. R.** (editor) Agricultural Water Quality Research Conference, Lake Arrowhead, California, Aug. 12-14, 1963, Proceedings: California Univ. Water Resources Center Rept. 5, 69 p., 1963.
- 0508 **Lusby, G. C.; Turner, G. T.; Thompson, J. R.; Reid, V. H.** Hydrologic and biotic characteristics of grazed and ungrazed watersheds of the Badger Wash basin in western Colorado, 1953-1958: U.S. Geol. Survey Water-Supply Paper 1532-B, p. B1-B73, 1963, [Jan. 1964].
- Lusby, G. C.** *See* Schumm, S. A. 0921
- 0509 **Lustig, L. K.** Competence of transport on alluvial fans: Art. 92 in U.S. Geol. Survey Prof. Paper 475-C, p. C126-C129, Nov. 1963.
- 0510 **Lyman, W. D.** The Columbia River--Its history, its myths, its scenery, its commerce: Portland, Oregon, Binfords and Mort, 367 p.
- Lynch, E. J.** *See* Davis, S. N. 1351
- Lynn, R. J.** *See* Stroup, E. D. 1014
- Lyons, J. W.** *See* VanWazer, J. R. 1113
- 0511 **Lysgaard, L.** On the climatic variation, in Changes of climate: UNESCO Arid Zone Research Ser., v. 20, p. 151-159, 1963.

- 1356 **Maasland, D. E. L.; Bittinger, M. W.** (editors) Symposium on Transient Ground Water Hydraulics, Fort Collins, Colo., July 25-27, 1963, Proceedings: Fort Collins, Colorado State Univ. Civil Eng. Sec., 223 p., Dec. 1963.
- 0514 **Macan, T. T.** Freshwater ecology: New York, John Wiley and Sons, Inc., 338 p., 1963.
- 1292 **MacCready, P. B., Jr.** Weather modification and water resources: Texas A and M Univ., Water Resources Inst., Water for Texas Conf., 8th ann., College Station, Texas, 1963, Proc., p. 46-48, 1963.
- MacGillivray, N. A.** See Lawless, G. P. 0304
- MacGillivray, N. R.** See Nixon, P. R. 0556
- Mack, F. K.** See Heath, R. C. 0748
- 0515 **Mack, L. E.** Water law in Arkansas: Little Rock, Arkansas, Univ. Coll. Business Admin., Indus. Research and Ext. Center, 74 p., 1963.
- Mackenthun, K. M.** See Ingram, W. M. 0312
- 0452 **MacRostie, Wayne; Eaton, J. R.** The California State Water Project in 1963: California Dept. Water Resources Bull. 132-63, 288 p., Apr. 1963.
- 0516 **Maderak, M. L.** Quality of waters, Minnesota--A compilation, 1955-62: Minnesota Div. Waters Bull. 21, 104 p., June 1963.
- Madison, R. A.** See Kirkpatrick, G. A. 0374
- 0517 **Maeovsky, Anthony; Drake, J. A.** Records and logs of selected wells and test holes and chemical analyses of water in southeastern Massachusetts: Massachusetts Water Resources Comm., Massachusetts Basic-Data Rept. 7, Ground-Water Ser., 55 p., 1963.
- Main, Richard.** See Chilingar, G. V. 0253
- Malhoit, M. M.** See Emery, P. A. 0219
- 0518 **Malmberg, Glenn.** Las Vegas Valley, Nev., in Thomas, H. E., and others, Effects of drought in the Colorado River Basin: U.S. Geol. Survey Prof. Paper 372-F, p. F9-F11, Oct. 1963.
- 0519 **Mancinko, George.** The Columbia Basin Project--expectations, realizations, implications: Geog. Review, v. 53, no. 2 p. 185-199, Apr. 1963.
- 0520 **Mann, D. E.** The politics of water in Arizona: Tucson, The University of Arizona Press, 317 p., 1963.
- 0521 **Mannerling, J. V.; Meyer, L. D.** The effects of various rates of surface mulch on infiltration and erosion: Soil Sci. Soc. America Proc., v. 27, no. 1, p. 84-86, Jan.-Feb. 1963.
- 0522 **Mao, Shieh-Wen; Rice, Leonard.** Sediment-transport capability in erodible channels: Am. Soc. Civil Engineers Proc. Paper 3569, Hydraulics Div. Jour., v. 89, no. HY4, p. 69-95, July 1963.
- 0523 **Marine, I. W.** Ground-water resources of the Bryce Canyon National Park area, Utah, with a section on the drilling of a test well: U.S. Geol. Survey Water-Supply Paper 1475-M, p. 441-486, Feb. 1963.
- 0524 **Marine, I. W.; Price, Don.** Selected hydrologic data, Jordan Valley, Salt Lake County, Utah: Utah State Engineer Basic-Data Rept. 4, 30 p., 1963.

- 0525 **Marine, I. W.** Correlation of water-level fluctuations with climatic cycles in the Oklahoma Panhandle: U.S. Geol. Survey Water-Supply Paper 1669-K, p. K1-K10, Apr. 1963.
- 1503 **Marks, W. D.** Michigan and the Great Lakes: Lansing, Michigan Water Resources Comm., 31 p., 1963.
- 1485 **Marlatt, William; Riehl, Herbert.** Precipitation regimes over the upper Colorado River: Jour. Geophys. Research, v. 68, no. 24, p. 6447-6458, Dec. 15, 1963.
- Marris, A. W.** See Brown, O. G. 0279
- Marston, R. B.** See Harrold, L. L. 0819
- 0528 **Martin, J. C.; James, D. M.** Analysis of pressure transients in two-phase radial flow: Soc. Petroleum Engineers Jour., v. 3, no. 2, p. 116-126, June 1963.
- Martin, R. O. R.** See Hardison, C. H. 0809
- Martin, R. O. R.** See Hardison, C. H. 0810
- Marvin, Richard.** See Wood, L. A. 1208
- 0529 **Mason, C. C.** Availability of ground water from the Goliad Sand in the Alice area, Texas: Texas Water Comm. Bull. 6301, 107 p., Mar. 1963.
- 0530 **Mason, C. C.** Ground-water resources of Refugio County, Texas: Texas Water Comm. Bull. 6312, 122 p., Oct. 1963.
- Mason, J. L.** See Wilcox, J. C. 1507
- Mason, R. W.** See Orveg, Svenn. 0576
- 0531 **Masselli, J. W.; Masselli, N. W.; Burford, M. G.** White water wastes from paper and paperboard mills—Pollution sources and methods of treatment: Boston, New England Interstate Water Pollution Control Comm., 55 p., 1963.
- Masselli, N. W.** See Masselli, J. W. 0531
- 0532 **Mast, R. F.; Potter, P. E.** Sedimentary structures, sand shape fabrics, and permeability, II: Jour. Geology, v. 71, no. 5, p. 548-565, Sept. 1963.
- Mast, R. F.** See Potter, P. E. 0616
- 0533 **Matalas, N. C.** Statistics of a runoff-precipitation relation: U.S. Geol. Survey Prof. Paper 434-D, p. D1-D9, 1963, [Dec. 1962].
- 0534 **Matalas, N. C.** Autocorrelation of rainfall and streamflow minimums: U.S. Geol. Survey Prof. Paper 434-B, p. B1-B10, Mar. 1963.
- 0535 **Matalas, N. C.** Probability distribution of low flows: U.S. Geol. Survey Prof. Paper 434-A, p. A1-A27, Apr. 1963.
- 1425 **Mather, J. R.** (editor) Average climatic water balance data of the continents. Part III, U.S.S.R.: C. W. Thornthwaite, Associates, Lab. of Climatology, Publications in Climatology, v. 16, no. 2, p. 267-378, 1963.
- 1486 **Mather, J. R.** (editor) Average climatic water balance data of the continents. Part II, Asia (excluding U.S.S.R.): Thornthwaite, C. W., Associates, Lab. Climatology, Publications in Climatology, v. 16, no. 1, 262 p., 1963.
- 0537 **Mathers, A. A.** (and others) Some morphological, physical, chemical, and mineralogical properties of seven southern Great Plains Soils: U.S. Agr. Research Service ARS 41-85, 63 p., Oct. 1963.

- Matulis, J. T.** *See* Hundley, C. L. 0699
- 0538 **Maughan, W. D.; Kawano, R. Y.** Project yields by a probability method: Am. Soc. Civil Engineers Proc. Paper 3513, Hydraulics Div. Jour., v. 89, no. HY3, p. 41-60, May 1963.
- 0539 **Maxey, G. B.; Hackett, J. E.** Applications of geohydrologic concepts in geology: Jour. Hydrology [Amsterdam], v. 1, no. 1, p. 35-45, 1963.
- 0540 **May, H. G.** A simplified time- and distance-drawdown graph, *in* Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C29-C32, 1963.
- 0440 **McCall, J. E.; Lendo, A. C.** Surface water supply of New Jersey, streamflow records October 1, 1955 to September 30, 1960: New Jersey Div. Water Policy and Supply Spec. Rept. 20, 425 p., 1963.
- 0441 **McCartney, David.** Test of a continuous dissolved-oxygen recorder, *in* Mesnier, G. N. and Iseri, K. T., compilers, Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, p. Z33-Z44, Nov. 1963.
- McCollum, M. J.** *See* Callahan, J. T. 0031
- 0442 **McCollum, M. J.** Underground accumulation of refined gasoline—Savannah, Georgia: Georgia Mineral Newsletter, v. 16, nos. 3-4, p. 81-86, Fall-Winter 1963.
- McCollum, M. J.** *See* Wait, R. L. 1123
- 0646 **McCutchan, A. I.** Short cuts in hydrology: Am. Soc. Civil Engineers Proc. Paper 3522, Hydraulics Div. Jour., v. 89, no. HY3, p. 203-219, May 1963.
- 1275 **McDermott, G. N.** Waste characterization concepts—predicting potential damages and treatability of waste waters, *in* Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112, (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 803-815, 1963.
- McDonald, P. M.** *See* Anderson, H. W. 0046
- McGauhey, P. H.** *See* Lofting, E. M. 0500
- 0443 **McGinnis, L. D.; Kempton, J. P.; Reigold, P. C.** Relationship of gravity anomalies to a drift-filled bedrock valley system in northern Illinois: Illinois State Geol. Survey Circ. 354, 24 p., 1963.
- 0444 **McGovern, H. E.; Coffin, D. L.** Potential ground-water development in the northern High Plains: Colorado Water Conserv. Board Ground-Water Circ. 8, 8 p., June 1963.
- McGuinness, C. L.** *See* Baldwin, H. L. 0093
- 1483 **McGuinness, C. L.** The role of ground water in the national water situation: U.S. Geol. Survey Water-Supply Paper 1800, 1121 p., Aug. 1963.
- 0446 **McGuinness, J. L.** Accuracy of estimating watershed mean rainfall: Jour. Geophys. Research, v. 68, no. 16, p. 4763-4767, Aug. 15, 1963.
- 0447 **McKee, J. E.; Wolf, H. W.** (editors) Water quality criteria, 2d ed: California State Water Quality Control Board Pub. 3-A, 548 p., 1963.
- McKellar, I. C.** *See* Goldthwait, R. P. 0784
- 0448 **McLaughlin, T. G.** San Luis Valley, Colorado, *in* Thomas, H. E., and others, Effects of drought in the Rio Grande Basin: U.S. Geol. Survey Prof. Paper 372-D, p. D6-D7, Mar. 1963.

- McManus, D. A.** *See* Gross, M. G. 1323
- 0450 **McMaster, W. M.** Geology and ground-water resources of the Athens area, Alabama: Alabama Geol. Survey Bull. 71, 45 p., 1963.
- 1484 **McMaster, W. M.; Harris, W. F., Jr.** General geology and ground-water resources of Limestone County, Alabama, a reconnaissance report: Alabama Geol. Survey County Rept. 11, 43 p., 1963.
- 0451 **McQueen, I. S.** Development of a hand portable rainfall-simulator infiltrometer: U.S. Geol. Survey Circ. 482, 16 p., Dec. 1963.
- 0453 **McVicker, D. S.** Pollution hazards related to agricultural pursuits: Kansas Acad. Sci. Trans., v. 66, no. 1, p. 17-24, Spring 1963.
- 0542 **Meade, R. H.** Relation of the pore volume of silty sediments to overburden load, particle size, and sorting: Art. 210 in U.S. Geol. Survey Prof. Paper 450-E, p. E111-E114, Mar. 1963.
- 1440 **Meade, R. H.** Factors influencing the pore volume of fine-grained sediments under low-to-moderate overburden loads: Sedimentology, v. ?, no. 3, p. 235-242, Sept. 1963.
- 0543 **Means, R. E.; Parcher, J. V.** Physical properties of soils: Columbus, Ohio, Charles E. Merrill Books, Inc., 464 p., 1963.
- 0544 **Meier, E. B.** Significance of detergents and commercial fertilizers in water resources: Am. Water Works Assoc. Jour., v. 55, no. 7, p. 930-936, July 1963.
- 0545 **Meier, Wilbur.** Texas gulf coast industrial water survey: Texas Water Comm. Circ. 63-02, 23 p., Apr. 1963.
- 0546 **Meinck, Fritz; Mohle, Helmut.** Dictionary of water and sewage engineering: New York, Elsevier Pub. Co., 449 p., 1963.
- 0547 **Meisler, Harold.** Hydrogeology of the carbonate rocks of the Lebanon Valley, Pennsylvania: Pennsylvania Geol. Survey, Bull. 4th Ser., W 18, 81 p., 1963.
- Melhorn, P. F.** *See* Harleman, D. R. F. 1476
- 0548 **Mendenhall, Howard.** Conservancy districts—useful tools for water development: Am. Forests, v. 69, no. 8, p. 20-22, 46-51, Aug. 1963.
- 0647 **Mendieta, H. B.; Blakey, J. F.** Brazos River basin reservoir studies, progress report, May 1962—Chemical quality and stratification of Belton, Whitney, and Possum Kingdom Reservoirs: Texas Water Comm. Memo. Rept. 63-01, 24 p., Feb. 1963.
- 0648 **Meneley, W. A.** Early contributions to the groundwater hydrology of Alberta: Appendix A, Hydrologic terminology: Alberta Research Council Bull. 12, p. 112-119, 1963.
- 0649 **Meneley, W. A.** Occurrence and movement of groundwater in Alberta, in Early contributions to the groundwater hydrology of Alberta: Alberta Research Council Bull. 12, p. 4-12, 1963.
- 0658 **Meneley, W. A.** Early contributions to the groundwater hydrology of Alberta: Appendix B, Mathematical models: Alberta Research Council Bull. 12, p. 120-123, 1963.
- Menke, C. G.** *See* Clark, W. E. 0226
- Menon, K. K.** *See* Menon, M. P. 0650

- 0650 **Menon, M. P.; Menon, K. K.; Kuroda, P. K.** On the stratospheric fallout of bomb-produced cerium isotopes: *Jour. Geophys. Research*, v. 68, no. 15, p. 4495-4499, Aug. 1, 1963.
- 0651 **Meservey, A. B.** Emergency decontamination preparations at Chalk River: *Nuclear Safety*, v. 4, no. 4, p. 87-90, 101, 1963.
- 0652 **Mesnier, G. N.; Iseri, K. T.** (compilers) Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, p. Z1-Z64, Nov. 1963. [Individual papers have been cited separately.]
- 0653 **Messinger, Harry.** Dissipation of heat from a thermally loaded stream: Art. 104 in U.S. Geol. Survey Prof. Paper 475-C, p. C175-C178, Nov. 1963.
- Metzger, D. G.** *See* Twenter, F. R. 1063
- 0654 **Metzler, D. F.** Water quality management in Kansas: *Kansas Acad. Sci. Trans.*, v. 66, no. 1, p. 4-13, Spring 1963.
- 0643 **Meyboom, P.** Induced infiltration, Medicine Hat, Alberta, in Early contributions to the groundwater hydrology of Alberta: *Alberta Research Council Bull.* 12, p. 88-97, 1963.
- 1376 **Meyboom, P.** Patterns of groundwater flow in the prairie profile, in Canada National Research Council, Groundwater, Proceedings of Hydrology Symposium No. 3, Calgary, Alberta, 1962: Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 5-33, 1963.
- Meyer, Gerald.** *See* Doll, W. L. 0183
- Meyer, L. D.** *See* Mannering, J. V. 0521
- Meyer, R. R.** *See* Theis, C. V. 0980
- 0655 **Meyer, W. R.** Use of a neutron moisture probe to determine the storage coefficient of an unconfined aquifer: Art. 234 in U.S. Geol. Survey Prof. Paper 450-E, p. E174-E176, Mar. 1963.
- 0656 **Meyers, L. E.** Water conservation—A research challenge: *Jour. Soil and Water Conserv.*, v. 18, no. 1, p. 31-34, Jan.-Feb. 1963.
- 0657 **Meyers, R. E.** Surface-water resources of Iowa, October 1, 1955 to September 30, 1960: *Iowa Geol. Survey Water Supply Bull.* 8, May 1963.
- 0659 **Michael, Curtis.** Evaporation control—A new tool for water management: *Jour. Soil and Water Conserv.*, v. 18, no. 6, p. 223-229, Nov.-Dec. 1963.
- 1441 **Michigan Water Resources Commission.** Water resource conditions and uses in the Shiawassee River basin: *Lansing, Mich. Water Resources Comm.*, 113 p., Oct. 1963.
- 1464 **Michigan Water Resources Commission.** Water quality monitoring program—Water quality records, 1963: *Lansing, Mich. Water Resources Comm.*, 69 p., 1963.
- 1270 **Middleton, F. M.; Pettit, H. H.; Rosen, A. A.** The Mega Sampler for extensive investigation of organic pollutants in water, in *Industrial Waste Conference*, 17th, Lafayette, Indiana, 1962, Proc.: *Purdue Univ. Eng. Ext. Dept. Ser.* 112. (Purdue Univ. Eng. Bull., v. 47, no. 32, Mar. 1963), p. 454-460, 1963.

- 0662 **Middleton, H. K.** (editor) Hydraulic research in the United States, 1963, including contributions from Canadian laboratories: U.S. Natl. Bur. Standards Misc. Pub. 249, 210 p., Aug. 1963.
- 0663 **Miller, C. R.; Borland, W. M.** Stabilization of Fivemile and Muddy Creeks: Am. Soc. Civil Engineers Proc. Paper 3392, Hydraulics Div. Jour., v. 89, no. HY1, p. 67-98, Jan. 1963.
- Miller, C. R.** See Woolhiser, D. A. 1396
- 0664 **Miller, D. E.; Bunger, W. C.** Moisture retention by soil with coarse layers in the profile: Soil Sci. Soc. America Proc., v. 27, no. 5, p. 586-589, Sept.-Oct. 1963.
- 0665 **Miller, D. T.** (editor) Report for the fiscal year July 1, 1962, to June 30, 1963: Los Angeles, Metropolitan Water District of Southern California, 25th Ann. Rept., 197 p., 1963.
- Miller, G. A.** See Evenson, R. E. 0225
- 0666 **Miller, J. P.; Leopold, L. B.** Simple measurements of morphological changes in river channels and hill slopes, in Changes of climate: UNESCO Arid Zone Research Ser., v. 20, p. 421-427, 1963.
- 0644 **Miller, J. S.; Walker, C. J.** Laboratory test method for unsteady state gas flow in consolidated porous media: U.S. Bur. Mines Rept. Inv. 6302, 29 p., 1963.
- 0667 **Miller, R. J.; Low, P. F.** Threshold gradient for water flow in clay systems: Soil Sci. Soc. America Proc., v. 27, no. 6, p. 605-609, Nov.-Dec. 1963.
- Miller, W. A.** See Straka, G. C. 1012
- 0668 **Mills, W. B.** Use of plastic tubes for peak-stage gages on reservoirs, in Mesnier, G. N., and Iseri, K. T., compilers, Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, p. Z27-Z28, Nov. 1963.
- 0669 **Mills, W. B.** Annotated bibliography of surface-water publications and open-file reports of the Texas Water Commission and U.S. Geological Survey for Texas through June 1962: Texas Water Comm. Circ. 63-04, 38 p., May 1963.
- Milne, R. A.** See vonSchaik, J. C. 1442
- 0670 **Milojevic, Miloje.** Radial collector wells adjacent to the river bank: Am. Soc. Civil Engineers Proc. Paper 3704, Hydraulics Div. Jour., v. 89, no. HY6, p. 133-161, Nov. 1963.
- 0671 **Mink, J. F.** Oahu water plan: Honolulu, Hawaii, Honolulu Board of Water Supply, 68 p., Mar. 1963.
- 0672 **Minnesota Department of Health.** Radioactivity in Minnesota surface water, April-November 1962: Radiolog. Health Data, v. 4, no. 4, p. 205-206, Apr. 1963.
- 0673 **Minnesota Department of Health.** Radioactivity in Minnesota surface water, Dec. 1962-June 1963: Radiolog. Health Data, v. 4, no. 11, p. 568-569, Nov. 1963.
- 0674 **Minnesota Division of Game and Fish.** Minnesota lakes—An index and guide: St. Paul, Minnesota Div. Game and Fish, 101 p., July 1963.
- 0645 **Mirajgaoker, A. G.; Charlu, K. L. N.** Natural roughness effects in rigid open channels: Am. Soc. Civil Engineers Proc. Paper 3630, Hydraulics Div. Jour., v. 89, no. HY5, p. 29-44, Sept. 1963.

- 0410 **Mistry, P. D.; Bloodworth, M. E.** The effect of surface-active compounds on the suppression of water evaporation from soils: Internat. Assoc. Sci. Hydrology, Pub. 62, p. 59-71, 1963.
- Mitchell, C. G.** *See* Hahl, D. C. 0743
- Mitra, A.** *See* Taylor, G. C., Jr. 1028
- 0964 **Miyake, Y.; Tsubota, H.** Estimation of the direct contribution of meteoric water to river waters by means of fall-out radiocaesium and radiostrontium, in Radioisotopes in hydrology, Proc. of a symposium, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, p. 425-431, 1963: [Available in U.S. from International Publications, Inc., New York, N. Y.]
- 0411 **Mobasher, Fereidoun; Todd, D. K.** Investigation of the hydraulics of flow near recharge wells: California Univ. Water Resources Center Contr. 72, 32 p., Apr. 1963.
- 0412 **Moessner, K. E.** Estimating depth of small mountain lakes by photo measurement techniques: Photogrammetric Eng., v. 29, no. 4, p. 580-588, July 1963.
- 1439 **Mogg, J. L.** Technical aspects of gravel well construction: New England Water Works Assoc. Jour., v. 77, no. 2, p. 155-164, June 1963.
- Mohle, Helmut.** *See* Meinck, Fritz. 0546
- 0414 **Molof, J. J.** Drainage in California's Imperial Valley: Land and Water Contracting, v. 5, no. 3, p. 9-11, Mar. 1963.
- Molyneux, L.** *See* Caisley, B. 0019
- Monke, E. J.** *See* Lembke, W. D. 0484
- 1365 **Moore, A. M.** Instrumentation for water-temperature studies, in Water temperature—Influences, effects, and control: U.S. Public Health Service Pacific NW Water Lab., Pacific NW Symposium on Water Pollution Research, 12th, Corvallis, Oreg., 1963, Proc., p. 101-110, Nov. 1963.
- 0415 **Moore, C. V.** Value of storing stream runoff for irrigation use: Nat. Resources Jour., v. 3, no. 1, p. 98-102, May 1963.
- 0416 **Moore, F. L.** Novel radiotracer method for fluoride determination: Anal. Chemistry, v. 35, no. 8, p. 1032-1034, July 1963.
- Moore, G. K.** *See* Bingham, R. H. 0124
- Moore, G. K.** *See* Harris, H. B. 0815
- Moore, J. E.** *See* Moulder, E. A. 0427
- Moore, J. R.** *See* Yarlett, L. L. 1217
- 0417 **Morey, P. S.** Index to well samples and cores (Revised through 1962): Austin, Texas Bur. Econ. Geology, 683 p., Oct. 1963.
- 0418 **Morgan, C. O.** Ground-water resources of East Feliciana and West Feliciana Parishes, Louisiana: Baton Rouge, Louisiana Dept. Public Works, 58 p., 1963.
- 0419 **Morgan, C. O.; Winner, M. D., Jr.** Salt-water encroachment in aquifers of the Baton Rouge area—Preliminary report and proposal: Baton Rouge, Louisiana Dept. Public Works, 37 p., 1963.

- 1287 **Morgan, W. E.** The Colorado State University water resource program: Texas A and M Univ., Water Resources Inst., Water for Texas Conf., 8th ann., College Station, Texas, 1963, Proc., p. 22-25, 1963.
- 0420 **Morisawa, Maria.** Distribution of stream-flow-direction in drainage patterns: Jour. Geology, v. 71, no. 4, p. 528-529, July 1963.
- 0421 **Morreale, Eva H.** Federal power in western waters—The Navigation Power and the Rule of No Compensation: Nat. Resources Jour., v. 3, no. 1, p. 1-77, May 1963.
- Morris, D. A.** See Johnson, A. I. 0335
- 0422 **Morris, R. L.; Dougherty, J. D.; Ronald, G. W.** Chemical aspects of actinomycete metabolites as contributors of taste and odor: Am. Water Works Assoc. Jour., v. 55, no. 10, p. 1380-1390, Oct. 1963.
- Morse, E. K.** See White, N. D. 1186
- 0958 **Moser, H.; Neumaier, F.; Rauert, W.** New experiences with the use of radioactive isotopes in hydrology, in Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, p. 283-295, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- Mosino, P. A.** See Siliceo, E. P. 1004
- 0423 **Moss, A. S.** The physical nature of common sandy and pebbly deposits, part II: Am. Jour. Sci., v. 261, no. 4, p. 297-343, 1963.
- 0424 **Motts, W. S.** Water resources of Okmulgee County, in Geology and water resources of Okmulgee County, Oklahoma: Oklahoma Geol. Survey Bull. 91, part II, p. 81-123, 1963.
- 0425 **Moulder, E. A.** Locus circles as an aid in the location of hydrogeologic boundary, in Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C110-C112, 1963.
- 0426 **Moulder, E. A.; Klug, M. L.** Jetting method of installing small diameter wells, in Bentall, Ray, compiler, Methods of collecting and interpreting ground-water data: U.S. Geol. Survey Water-Supply Paper 1544-H, p. H14-H29, 1963.
- 0427 **Moulder, E. A.; Jenkins, C. T.; Moore, J. E.; Coffin, D. L.** Effects of water management on a reach of the Arkansas Valley, La Junta to Las Animas, Colorado: Colorado Water Conserv. Board Ground-Water Circ. 10, 20 p., 1963.
- 0428 **Mount, J. R.** Investigation of ground-water resources near Fredericksburg, Texas: Texas Water Comm. Memo. Rept. 63-03, 115 p., Nov. 1963.
- 0429 **Mourant, W. A.** Water resources and geology of the Rio Hondo drainage basin, Chaves, Lincoln, and Otero Counties, New Mexico: New Mexico State Engineer Tech. Rept. 28, 85 p., 1963.
- 0430 **Mower, R. W.** Selected hydrologic data, Pavant Valley, Millard County, Utah: Utah State Engineer Basic-Data Rept. 5, 20 p., 1963.
- 0431 **Moyle, W. R., Jr.** Data on water wells in Indian Wells Valley area; Inyo, Kern and San Bernardino Counties, California: California Dept. Water Resources Bull. 91-9, 243 p., 1963.
- 0432 **Muller, Fritz.** Englacial temperature measurements on Axel Heiberg Island, Canadian Arctic Archipelago: Internat. Assoc. Sci. Hydrology Pub. 61, p. 168-180, 1963.

**Mundorff, J. C.** See Kister, L. R., Jr. 0375

- 0433 **Mundorff, M. J.; Broom, H. C.; Kilburn, Chabot.** Reconnaissance of the hydrology of the Little Lost River basin, Idaho: U.S. Geol. Survey Water-Supply Paper 1539-Q, p. Q1-Q51, May 1963.
- 0434 **Mundorff, M. J.; Sisco, H. G.** Ground water in the Raft River basin, Idaho, with special reference to irrigation use, 1956-60: U.S. Geol. Survey Water-Supply Paper 1619-CC, p. CC1-CC23, July 1963.
- 0973 **Münnich, K. O.; Roether, W.** A comparison of Carbon-14 and tritium ages of ground water, in Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency, Proc. Ser. 71, p. 397-406, 1963. [Available in U.S. from International Publications, Inc. New York, N.Y.]
- Musgrove, R. H.** See Clark, W. E. 0226
- 0435 **Musgrove, R. H.** Accuracy of three nonstandard rain gages, in Mesnier, G. N. and Iseri, K. T., compilers, Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, p. Z45-Z47, Nov. 1963.
- 0436 **Musser, J. L.** Description of physical environment of strip-mining operations in parts of Beaver Creek basin, Kentucky: U.S. Geol. Survey Prof. Paper 427-A, p. A1-A25, 1963, [Feb. 1964].
- 1371 **Myers, L. E.** Water harvesting by catchments, in Arizona Water Resources Comm., Water conservation from mountains to deserts: Arizona Watershed Symposium, 7th, Phoenix, Ariz., 1963, Proc., p. 19-22, 1963.
- 0437 **Myers, R. E.** Floods at Des Moines, Iowa: U.S. Geol. Survey Hydrol. Inv. Atlas HA-53, one sheet, Feb. 1963.
- 0438 **Myers, V. A.; Lott, G. A.** Three-dimensional wind flow and resulting precipitation in northern California storm: U.S. Weather Bur. Research Paper 44, 46 p., 1963.
- 1330 **Myers, V. L.** Water conservation research for limited irrigation water supplies: Nevada Water Conf., 17th, Carson City, Nev., 1963, Proc., p. 3-13, 1963.
- 0439 **Myrick, R. M.; Leopold, L. B.** Hydraulic geometry of a small tidal estuary: U.S. Geol. Survey Prof. Paper 422-B, p. B1-B18, Aug. 1963.
- 0454 **Nace, R. L.** Waters of the earth: Sci. Teacher, v. 30, no. 3, 8 p., April 1963.
- 0455 **Nace, R. L.; Tison, L. J.** International cooperation in scientific hydrology: ICSU Review World Sci., v. 5, no. 2, p. 116-123, April 1963.
- Naftel, W. L.** See Anders, R. B. 0052
- 0456 **Nakayama, F. S.; Jackson, R. D.** Diffusion of tritiated water in soils: Soil Sci. Soc. America Proc., v. 27, no. 3, p. 255-258, May-June 1963.
- 0457 **Namias, J.** Surface-atmosphere interactions as fundamental causes of drought and other climatic fluctuations, in Changes of climate: UNESCO Arid Zone Research Ser., v. 20, p. 345-359, 1963.
- 0458 **National Academy of Sciences.** Interaction between the atmosphere and the oceans [Report of Natl. Acad. Sci.-Natl. Research Council, Joint Panel on Air-Sea Interaction]: Am. Meteorol. Soc. Bull., v. 44, no. 1, p. 4-17, Jan. 1963.
- 0459 **National Research Council.** An outline of international programs in hydrology, [Report of Natl. Research Council, Ad. Hoc. Committee on International Programs in Atmospheric Sciences and Hydrology]: Natl. Acad. Sci.-Natl. Research Council Pub. 1131, 46 p., 1963.

- 0460 **Navone, Remo; Harmon, J. A.; Voyles, C. F.** Nitrogen content of ground water in southern California: Am. Water Works Assoc. Jour., v. 55, no. 5, p. 615-618, May 1963.
- 1039 **Nebraska Resources Division.** Nebraska's water story: Lincoln, Nebraska Resources Div., 14 p., 1963.
- 0461 **Neel, J. K.** Industrial wastes and pesticides—Avenues through which they affect water quality and aquatic life: Kansas Acad. Sci. Trans., v. 66, no. 1, p. 42-48, Spring 1963.
- 0462 **Neff, E. L.** Plotting positions for logarithmic-normal frequency studies: U.S. Agr. Research Service ARS 41-77, 14 p., Mar. 1963.
- Neill, J. C.** See Stall, J. B. 0872
- Neill, J. C.** See Walton, W. C. 1136
- 1254 **Nelson, D. J.** Role of bottom organisms, in Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm. Div. Tech. Inf. TID-7664, p. 193-209, July 1963.
- Nelson, M. W.** See Farnes, P. E. 1238
- Nelson, R. W.** See Reisenauer, A. E. 1331
- 1419 **Nelson, R. W.; Reisenauer, A. E.** Application of radioactive tracers in scientific ground-water hydrology, in Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy, Proc. Ser. 71, p. 207-230, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- 0463 **Nelson, W. B.** Escalante Valley, Utah, in Thomas, H. E., and others, Effects of drought in basins of interior drainage: U.S. Geol. Survey Prof. Paper 372-E, p. E29-E35, Dec. 1963.
- 0464 **Neuberger, J. W.; Sharp, A. L.** Improved staff gage system for reservoirs: Agr. Eng., v. 44, no. 2, p. 86-87, Feb. 1963.
- Neumaier, F.** See Moser, H. 0958
- 1399 **Nevada Dept. Conserv. Nat. Resources.** (and Nevada State Conservation Association) Nevada Water conference, 17th annual, Carson City, Sept. 26-27, 1963, Proceedings: Carson City, Nevada Dept. Conserv. and Nat. Resources, 103 p., 1963.
- 0465 **Nevada Dept. Conserv. Nat. Resources.** Fourth progress report on the Humboldt River Research Project: Carson City, Nevada Dept. Conserv. and Nat. Resources, 14 p., Jan. 1963.
- 0466 **Nevada Dept. Conserv. Nat. Resources.** Maggie Creek sub-basin, Humboldt River Basin, Nevada: Nevada Dept. Conserv. and Nat. Resources, Water and Related Land Resources Rept. 6, 83 p., Oct. 1963.
- 0467 **Nevada Dept. Conserv. Nat. Resources.** North Fork sub-basin, Humboldt River Basin, Nevada: Nevada Dept. Conserv. and Nat. Resources, Water and Related Land Resources Rept. 5, 83 p., Aug. 1963.
- 0468 **Nevada Dept. Conserv. Nat. Resources.** Mary's River sub-basin, Humboldt River Basin, Nevada: Nevada Dept. Conserv. and Nat. Resources, Water and Related Land Resources Rept. 4, 90 p., June 1963.
- 0469 **Nevada Dept. Conserv. Nat. Resources.** Ruby Mountains sub-basin, Humboldt River Basin, Nevada: Nevada Dept. Conserv. and Nat. Resources, Water and Related Land Resources Rept. 3, 129 p., May 1963.

- 1304 **New York Temporary State Comm.** (on Water Resources Planning) Water resources planning—Projects with a purpose—Progress report of the Commission: New York State Legislative Doc. (1963) no. 40, 210 p., 1963.
- Newcomb, R. C.** *See* Brown, S. G. 0002
- 0472 **Newcomb, R. C.** Ground water in the Orchard Syncline, Wasco County, Oregon: Ore Bin, v. 25, no. 8, p. 133-138, Aug. 1963.
- 0470 **Newcome, Roy, Jr.** Simplified method of altimeter surveying, *in* Mesnier, G. N., and Iseri, K. T., compilers, Selected techniques in water resources investigations: U.S. Geol. Survey Water-Supply Paper 1669-Z, p. Z59-Z64, Nov. 1963.
- 0471 **Newcome, Roy, Jr.; Page, L. V.; Sloss, Raymond.** Water resources of Natchitoches Parish, Louisiana: Louisiana Dept. Conserv., Geol. Survey; and Louisiana Dept. Public Works, Water Resources Bull. 4, 189 p., July 1963.
- Newcome, Roy, Jr.** *See* Page, L. V. 0552
- 0473 **Newport, T. G.; Haddor, Yousef.** Ground-water exploration in Al Marj area, Cyrenacia, United Kingdom of Libya: U.S. Geol. Survey Water-Supply Paper 1757-A, p. A1-A24, July 1963.
- Newport, T. G.** *See* Wiitala, S. W. 1191
- Newton, J. C.** *See* Cagle, J. W., Jr. 0017
- Nexon, P. R.** *See* Lawless, G. P. 0304
- Nielsen, D. R.** *See* Biggar, J. W. 0123
- Nielsen, D. R.** *See* Davidson, J. M. 0161
- Nielsen, D. R.** *See* Corey, J. C. 0407
- 0474 **Nielsen, D. R.; Biggar, J. W.** Hydrodynamic dispersion in porous media, *in* United States National report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 574-575, June 1963.
- 0475 **Nielsen, D. R.; Biggar, J. W.** Miscible displacement. IV, Mixing in glass beads: Soil Sci. Soc. America Proc., v. 27, no. 1, p. 10-13, Jan.-Feb. 1963.
- 1250 **Nielsen, J. M.** Behavior of radionuclides in the Columbia River, *in* Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm., Div. Tech. Inf. TID-7664, p. 91-112, July 1963.
- 0476 **Nielsen, R. L.; Tek, M. R.** Evaluation of scale-up laws for two-phase flow through porous media: Soc. Petroleum Engineers Jour., v. 3, no. 2, p. 164-176, June 1963.
- Nixon, P. R.** *See* Libby, F. J. 0492
- 0556 **Nixon, P. R.; MacGillivray, N. R.; Lawless, G. P.** Evapotranspiration—climate comparisons in coastal fogbelt, coastal valley, and interior valley locations in California: Internat. Assoc. Sci. Hydrology Pub. 62, p. 221-231, 1963.
- Nixon, P. R.** *See* vanBavel, C. H. M. 1147
- 0557 **Noble, D. G.** Well points for dewatering: Ground Water, v. 1, no. 3, p. 21-26, July 1963.
- 1429 **Noble, R. E.** Biases of coliform estimates and the influence of sodium thiosulfate on coliform survival in lake water: Am. Water Works Assoc. Jour., v. 55, no. 1, p. 115-124, Jan. 1963.

- Noehre, A. W. *See* Ellis, D. W. 0210
- Noehre, A. W. *See* Ellis, D. W. 0211
- Noehre, A. W. *See* Ellis, D. W. 0213
- Noehre, A. W. *See* Ellis, D. W. 0214
- Noehre, A. W. *See* Ellis, D. W. 0215
- 0558 Noll, C. A.; Stefanelli, L. J. Fluorometric and spectrophotometric determination of aluminum in industrial water: *Anal. Chemistry*, v. 35, no. 12, p. 1914-1916, Nov. 1963.
- 0559 Noll, D. C.; Roberto, T. T. Fuel oil contamination, in *Water supply protection against environmental hazards*, Joint Discussion: Am. Water Works Assoc. Jour., v. 55, no. 3, p. 257-259, Mar. 1963.
- 0560 Nordenson, T. J. Appraisal of seasonal variation in pan coefficients: Internat. Assoc. Sci. Hydrology Pub. 62, p. 279-286, 1963.
- 0561 Nordin, C. F., Jr.; Dempster, G. R., Jr. Vertical distribution of velocity and suspended sediment, Middle Rio Grande, New Mexico: U.S. Geol. Survey Prof. Paper 462-B, p. B1-B20, Sept. 1963.
- 0562 Nordin, C. F., Jr. A preliminary study of sediment transport parameters, Rio Puerco near Bernardo, New Mexico: U.S. Geol. Survey Prof. Paper 462-C, p. C1-C21, Dec. 1963.
- 0563 Norris, S. E. Permeability of glacial till: Art. 224 in U.S. Geol. Survey Prof. Paper 450-E, p. E150-E151, Mar. 1963.
- 0564 North Carolina Board of Health. North Carolina surface water, June 1958 December 1961: Radiolog. Health Data, v. 4, no. 5, p. 259-262, May 1963.
- 1430 North Carolina Board of Health. North Carolina cistern water, June and August 1962: Radiolog. Health Data, v. 4, no. 2, p. 103-104, Feb. 1963.
- 0549 Norvitch, R. F.; Schneider, Robert; Godfrey, R. G. Geology and hydrology of the Elk River, Minnesota, nuclear-reactor site: U.S. Geol. Survey Bull. 1133-C, p. C1-C25, July 1963.
- 0565 Novarro, J. A. Ground water development in New Haven: Am. Water Works Assoc. Jour., v. 55, no. 3, p. 291-295, Mar. 1963.
- Nukazawa, A. *See* Kobayashi, M. 0960
- 0566 Oborn, E. T. Effectiveness of common aquatic organisms in removal of dissolved lead from tap water: Art. 118 in U.S. Geol. Survey Prof. Paper 475-C, p. C220, Nov. 1963.
- 0567 O'Connor, D. J. Analysis of diffusion data of the Delaware River model: Internat. Jour. Air and Water Pollution, v. 7, nos. 11-12, p. 1073-1084, Dec. 1963.
- 0568 O'Connor, J. F. Extended and long-range weather forecasting: Am. Water Works Assoc. Jour., v. 55, no. 8, p. 1006-1018, Aug. 1963.
- 0569 O'Connor, J. T.; Renn, C. E. Evaluation of procedures for the determination of zinc: Am. Water Works Assoc. Jour., v. 55, no. 5, p. 631-638, May 1963.
- 1278 OEMING, L. F. Water resources management—The scientist's contribution, in Great Lakes Research Conf., 8th, Ann Arbor, Michigan, 1963, Proc.: Michigan Univ. Great Lakes Research Div. Pub. 10, p. 288-291, 1963.

- 0570 **Ogata, Akio.** Effect of the injection scheme on the spread of tracers in ground-water reservoirs: Art. 55 in U.S. Geol. Survey Prof. Paper 475-B, p. B199-B202, June 1963.
- Oglesby, R. T. *See* Weiss, C. M. 1178
- 0571 **Ogrosky, H. O.** Effects of conservation on water yield: Jour. Soil and Water Conserv., v. 18, no. 1, p. 11-13, Jan.-Feb. 1963.
- 0572 **Ohio Division of Water.** Water inventory of the Scioto River Basin: Ohio Div. Water, Ohio Water Plan Inventory Rept. 17, 76 p., Apr. 1963.
- 1409 **Ohio River Valley.** (Water Sanit. Comm., Detergent Subcommittee) Components of household synthetic detergents in water and sewage, [Report of the Ohio River Valley Water Sanitation Commission Detergent Subcommittee]: Am. Water Works Assoc. Jour., v. 55, no. 3, p. 369-401, Mar. 1963.
- Okita, T. *See* Yamagata, N. 1412
- 0573 **Okun, D. A.** (and others) A review of the literature of 1962 on wastewater and water pollution control: Water Pollution Control Federation Jour., v. 35, nos. 5-7, p. 553-586, 687-727, 819,876, May-July 1963.
- 1268 **Okun, D. A.; Lamb, J. C., III; Wells, C. C., Jr.** A waste control program for a river with highly variable flow, in Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112, (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 324-350, 1963.
- Olmsted, F. H. *See* Hely, A. G. 0749
- 1431 **Olson, R. V.** Soil moisture research and future water resources: Missouri Basin Inter-Agency Comm. Mtg., 130th, Manhattan, Kansas, Apr. 25, 1963, Minutes, App. C, p. C1-C6, 1963.
- 0574 **Olson, T. C.; Wischmeier, W. H.** Soil-erodibility evaluations for soils on the runoff and erosion stations: Soil Sci. Soc. America Proc., v. 27, no. 5, p. 590-592, Sept.-Oct. 1963.
- 0550 **Ontario Water Resources Commission.** Ground water in Ontario 1955 and 1956: Ontario Water Resources Comm. Ground Water Bull. 2, 377 p., 1963.
- 1040 **Oregon Water Resources Board.** South Coast Basin: Salem, Oregon Water Resources Board, 125 p., Jan. 1963.
- 1041 **Oregon Water Resources Board.** Umatilla River basin: Salem, Oregon Water Resources Board, 107 p., June 1963.
- 1042 **Oregon Water Resources Board.** Middle Willamette River basin: Salem, Oregon Water Resources Board, 138 p., June 1963.
- 0956 **Orem, H. M.** Base flow and summary of streamflow conditions in the Pacific Northwest since October 1, 1962, in Columbia Basin Water Forecast Comm. ann. mtg., 26th, Portland, Oregon, 1963, Proc.: Portland, Ore., U.S. Soil Conserv. Service, p. 12-16, July 1963.
- Orem, M. T. *See* Stierle, Harry. 1273
- Orlob, G. T. *See* Woods, P. C. 1211
- 0575 **Orsanco Detergent Subcommittee.** Components of household synthetic detergents in water and sewage: Am. Water Works Assoc. Jour., v. 55, no. 3, p. 369-402, Mar. 1963.
- 0576 **Orveg, Svenn; Mason, R. W.** Ice temperatures and heat flux, McCall Glacier, Alaska: Internat. Assoc. Sci. Hydrology Pub. 61, p. 181-188, 1963.

- 0577 **Osborn H. R.; Reynolds, W. N.** Convective storm patterns in the south-western United States: Internat. Assoc. Sci. Hydrology Bull., v. 8, no. 3, p. 71-83, Sept. 1963.
- Osborn, J. F.** See Pillsbury, A. F. 0611
- 0578 **Oster, J. D.; Low, P. F.** Activation energy for ion movement in thin water films on montmorillonite: Soil Sci. Soc. America Proc., v. 27, no. 4, p. 369-373, July-Aug. 1963.
- Osterle, Fletcher.** See Hornbeck, R. W. 0694
- Otton, E. G.** See Johnston, P. M. 0344
- 0579 **Otts, L. E., Jr.** Water requirements of the petroleum refining industry: U.S. Geol. Survey Water-Supply Paper 1330-G, p. 287-340, Dec. 1963.
- 0580 **Outmans, H. D.** On unique solutions for steady-state fingering in a porous medium: Jour. Geophys. Research, v. 68, no. 20, p. 5735-5737, Oct. 15, 1963.
- Overton, D. E.** See Holtan, H. N. 0685
- 0581 **Owen, Vaux, Jr.** Geology and ground-water resources of Lee and Sumter Counties, southwest Georgia: U.S. Geol. Survey Water-Supply Paper 1666, 70 p., Dec. 1963.
- 0582 **Owen, Vaux, Jr.** Geology and ground-water resources of Mitchell County, Georgia: Georgia Geol. Survey Inf. Circ. 24, 40 p., 1963.
- Ownbey, C. R.** See Poston, H. W. 1279
- Oza, M. M.** See Taylor, G. C., Jr. 1028
- 0583 **Page, H. G.** Water regimen of the inner valley of the San Pedro River near Mammoth, Arizona (A pilot study): U.S. Geol. Survey Water-Supply Paper 1669-I, p. II-122, July 1963.
- 0584 **Page, H. G.; Wayman, C. H.; Robertson, J. B.** Behavior of detergents (ABS), bacteria, and dissolved solids in water-saturated soils: Art. 237 in U.S. Geol. Survey Prof. Paper 450-E, p. E179-E181, Mar. 1963.
- Page, H. G.** See Wayman, C. H. 1161
- Page, H. G.** See Wayman, C. H. 1162
- Page, H. G.** See Wayman, C. H. 1163
- Page, H. G.** See Wayman, C. H. 1164
- Page, H. G.** See Wayman, C. H. 1166
- Page, L. V.** See Newcome, Roy, Jr. 0471
- 0552 **Page, L. V.; Newcome, Roy, Jr.; Graeff, G. D., Jr.** Water resources of Sabine Parish, Louisiana: Louisiana Dept. Conserv., Geol. Survey; and Louisiana Dept. Public Works Water Resources Bull. 3, 146 p., May 1963.
- 0585 **Page, L. V.** Water supply characteristics of Louisiana streams: Louisiana Dept. Public Works Tech. Rept. 1, 109 p., Apr. 1963.
- 0551 **Page, R. W.** Geology and ground-water appraisal of the Naval Air Missile Test Center area, Point Mugu, California: U.S. Geol. Survey Water-Supply Paper 1619-S, p. S1-S40, Nov. 1963.

- 0586 **Palmen, E.** Computation of the evaporation over the Baltic Sea from the flux of water vapor in the atmosphere: Internat. Assoc. Sci. Hydrology Pub. 62, p. 244-252, 1963.
- 1461 **Pan American Union.** (Inter-American Juridical Committee) Industrial and agricultural use of inter-national rivers and lakes, study and draft convention prepared by the Committee during its 1963 meeting: Washington, D.C., OAS Official Doc. OEA/Ser. I/VI.2 (English) CIJ-67, 29 p., 1963.
- 0587 **Papadopoulos, I. S.** Preparation of type curves for calculating T/S of a wedge-shaped aquifer: Art. 54 in U.S. Geol. Survey Prof. Paper 475-B, p. B196-B198, June 1963.
- Parcher, J. V.** See Means, R. E. 0543
- 0588 **Parizek, R. R.** The hydrologic cycle concept: Mineral Industries, Pennsylvania State Univ., Div. Mineral Industries Ext., v. 32, no. 7, 1963.
- 1253 **Parker, Frank.** Clinch River studies, in Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm. Div. Tech. Inf. TID-7664, p. 161-191, July 1963.
- 0589 **Paterson, W. S. B.; Savage, J. C.** Geometry and movement of the Athabasca glacier: Jour. Geophys. Research, v. 68, no. 15, p. 4513-4520, Aug. 1, 1963.
- 0590 **Paterson, W. S. B.; Savage, J. C.** Measurements on Athabasca glacier relating to the flow law of ice: Jour. Geophys. Research, v. 68, no. 15, p. 4537-4543, Aug. 1, 1963.
- Paterson, W. S. B.** See Savage, J. C. 0905
- 0591 **Patten, E. P., Jr.; Bennett, G. D.** Application of electrical and radioactive well logging to ground-water hydrology: U.S. Geol. Survey Water-Supply Paper 1544-D, D1-D60, June 1963.
- 1259 **Patterson, C. C.** Dispersion measurements, in Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm., Div. Tech. Inf. TID-7664, p. 295-308, July 1963.
- 0592 **Patterson, J. L.** Floods in Texas, magnitude and frequency of peak flows: Texas Water Comm. Bull. 6311, 31 p., App. 173 p., Dec. 1963.
- Pauszek, F. H.** See Ayer, G. R. 0067
- 1037 **Payne, W. J.** Synthetic detergents in water and sewage systems: Science, v. 139, no. 3551, p. 197-198, Jan. 1963.
- 0593 **Peace, R. R., Jr.** Geology and ground-water resources of Franklin County, Alabama—A reconnaissance: Alabama Geol. Survey Bull. 72, 55 p., 1963.
- Peace, R. R., Jr.** See Harris, H. B. 0816
- 1242 **Peak, G. W.** Snow pack evaporation factors, in Western Snow Conference, 31st ann. mtg., Yosemite Natl. Park, Calif., 1963, Proc.: Tacoma, Wash., p. 17-19, 1963.
- 0594 **Peck, E. L.; Pfankuch, D. J.** Evaporation rates in mountainous terrain: Internat. Assoc. Sci. Hydrology Pub. 62, p. 267-278, 1963.
- Peckham, A. E.** See Clebsch, Alfred, Jr. 1318
- Peckham, R. C.** See Baker, B. B. 0087
- Peckham, R. C.** See Baker, B. B. 0088

- 0595 **Peckham, R. C.** Summary of the ground-water aquifers in the Rio Grande basin: Texas Water Comm. Circ. 63-05, 16 p., June 1963.
- 0596 **Peckham, R. C.; Souders, V. L.; Dillard, J. W.; Baker, B. B.** Reconnaissance investigation of the ground-water resources of the Trinity River basin, Texas: Texas Water Comm. Bull. 6309, 110 p., Sept. 1963.
- 0597 **Peckham, R. C.** Availability and quality of ground water in Leon County, Texas: Texas Water Comm. Bull. 6513, May 1963.
- 0598 **Pedersen, D. E.; Lohnes, R. A.** Preliminary investigation of the Little Sioux River Valley: Iowa Acad. Sci. Proc., v. 70, p. 326-333, 1963.
- Pelishek, R. E.** See Pillsbury, A. F. 0611
- 0599 **Perlmutter, N. M.; Geraghty, J. J.** Geology and ground-water conditions in southern Nassau and southeastern Queens Counties, Long Island, New York: U.S. Geol. Survey Water-Supply Paper 1613-A, p. A1-A205, May 1963.
- 0600 **Perlmutter, N. M.; DeLuca, F. A.** Availability of fresh ground water, Montauk Point area, Suffolk County, Long Island, New York: U.S. Geol. Survey Water-Supply Paper 1613-B, p. B1-B39, May 1963.
- 0603 **Perlmutter, N. M.; Lieber, Maxim; Frauenthal, H. L.** Movement of a waterborne cadmium and hexavalent chromium wastes in South Farmingdale, Nassau County, Long Island, New York: Art. 105 in U.S. Geol. Survey Prof. Paper 475-C, p. C179-C184, Nov. 1963.
- 1472 **Perlmutter, N. M.; Soren, Julian.** Effects of major water-table changes in Kings and Queens Counties, New York City: Art. 219 in U.S. Geol. Survey Prof. Paper 450-E, p. E136-E139, Mar. 1963.
- 0604 **Perrier, E. R.; Johnston, W. R.** Measuring and predicting specific yield from subsoil core with porous plate apparatus: Am. Soc. Agr. Engineers Trans. (Gen. Ed.), v. 6, no. 2, p. 174-176, Sept. 1963.
- Peterka, A. S.** See Timblin, L. O., Jr. 0971
- Peters, N.** See Peterson, R. 0606
- 0605 **Peterson, H. V.; Heath, V. T.** Stock water facilities for the Pacific southwest: Jour. Soil and Water Conserv., v. 18, no. 3, p. 103-108, 1963.
- 0606 **Peterson, R.; Peters, N.** Heave of spillway structures on clay shales: Canadian Geotech. Jour., v. 1, no. 1, p. 5-15, Sept. 1963.
- Peterson, W. C.** See Burnham, W. L. 0013
- 0607 **Pettitt, B. M., Jr.** Ground-water reservoir in the Edwards limestone, in Thomas, H. E., and others, Effects of drought in the Rio Grande Basin: U.S. Geol. Survey Prof. Paper 372-C, p. C11-C12, Oct. 1963.
- Petri, L. R.** See Bradley, Edward. 0265
- Petri, L. R.** See Hopkins, W. B. 0692
- Petri, L. R.** See Huxel, C. J., Jr. 0700
- Pettit, H. H.** See Middleton, F. M. 1270
- 0608 **Peyton, Garland.** Georgia cooperative projects with the Water Resources Division, U.S.G.S., in Geologic investigations in Georgia, 1963—Department of Mines, Mining and Geology: Georgia Mineral Newsletter, v. 16, no. 3-4, p. 58-62, Fall-Winter 1963.

**Pfankuch, D. J.** *See* Peck, E. L. 0594

**Pfister, R. M.** *See* Dugan, P. R. 0191

- 0609 **Picciotto, E.; Wilgain, S.** Fission products in Antarctic snow, a reference level for measuring accumulation: *Jour. Geophys. Research*, v. 68, no. 21, p. 5965-5972, Nov. 1, 1963.
- 1497 **Pickard, W. F.** Solving the equations of uniform flow: *Am. Soc. Civil Engineers Proc. Paper 3567, Hydraulics Div. Jour.*, v. 89, no. HY4, p. 23-38, July 1963.
- Pillsbury, A. F.** *See* Johnson, W. R. 0343
- 0611 **Pillsbury, A. F.; Osborn, J. F.; Pelishek, R. E.** Residual soil moisture below the root zone in southern California watersheds: *Jour. Geophys. Research*, v. 68, no. 4, p. 1089-1091, Feb. 15, 1963.
- 0612 **Ping, Li Seung.** Measuring extremely low flow velocity of water in clays: *Soil Sci.*, v. 95, no. 6, p. 410-413, June 1963.
- 0613 **Pittendreigh, L. M.** Use of chemical injection wells to suppress biologic activity and to stabilize iron and manganese in ground waters: *New England Water Works Assoc. Jour.*, v. 77, no. 1, p. 35-50, Mar. 1963.
- 0614 **Pluhowski, E. J.; Kantrowitz, I. H.** Influence of land-surface conditions on Ground-water temperatures in southwestern Suffolk County, Long Island, New York: Art. 51 in U.S. Geol. Survey Prof. Paper 475-B, p. B186-B188, June 1963.
- Pollock, S. J.** *See* Johnson, P. M. 0342
- Poole, J. L.** *See* Sun, P-C. P. 1015
- 1481 **Poole, J. L.** Saline ground water—A little used and unmapped resource: *Ground Water*, v. 1, no. 3, p. 18-20, July 1963.
- Pope, W. L.** *See* Willardson, L. S. 0680
- Poston, H. W.** *See* Kehr, W. Q. 1266
- 1279 **Poston, H. W.; Kehr, W. Q.; Ownbey, C. R.** Scientific research and water quality management, in Great Lakes Research Conf., 8th, Ann Arbor, Michigan, 1963, Proc.: Michigan Univ. Great Lakes Research Div. Pub. 10, p. 292-295, 1963.
- 0553 **Poth, C. W.** Geology and hydrology of the Mercer quadrangle, Mercer, Lawrence, and Butler Counties, Pennsylvania: Pennsylvania Geol. Survey, 4th Ser., Bull. W16, 149 p., 1963.
- 0554 **Poth, C. W.** The ground-water observation-well program in Pennsylvania: Pennsylvania Geol. Survey, 4th Ser., Bull. W20, 18 p., 1963.
- Potter, P. E.** *See* Mast, R. F. 0532
- 0616 **Potter, P. E.; Mast, R. F.** Sedimentary structures, sand shape fabrics, and permeability, I: *Jour. Geology*, v. 71, no. 4, p. 441-471, July 1963.
- Powell, D. P.** *See* Stewart, E. H. 0990
- 1471 **Powell, W. J.; Carroon, L. E.; Avrett, J. R.** Water problems associated with oil production in Alabama: Alabama Geol. Survey Circ. 22, 63 p., 1963.
- 0618 **Powers, A. M.** Treatise on divining as a science: Foxboro, Massachusetts, Re-Craft Press, Inc., 27 p., 1963.

- 0619 **Prescott, G. C., Jr.** Reconnaissance of ground-water conditions in Maine: U.S. Geol. Survey Water-Supply Paper 1669-T, p. T1-T52, Nov. 1963.
- 0625 **Prescott, G. C., Jr.** Geologic map of the surficial deposits of part of southwestern Maine and their water-bearing characteristics: U.S. Geol. Survey Hydrol. Inv. Atlas HA-76, one sheet, Nov. 1963.
- 0953 **Preuss, F. A.; Todd, D. K.** Specific yield of unconsolidated alluvium: California Univ. Water Resources Center Contr. 76, 22 p., June 1963.
- Price, C. E.** *See* Liesch, B. A., 0493
- Price, Don.** *See* Marine, I. W. 0524
- Price, Don.** *See* Robinson, J. W. 0730
- 0954 **Price, W. A.** Patterns of flow and channeling in tidal inlets: Jour. Sed. Petrology, v. 33, no. 2, p. 279-290, June 1963.
- Price, W. E., Jr.** *See* Kirkpatrick, G. A. 0374
- 1407 **Price, W. E., Jr.** Geology and hydrology of alluvial deposits along the Ohio River between South Portsmouth and the Manchester Islands, Kentucky: U.S. Geol. Survey Hydrol. Inv. Atlas HA-73, one sheet, Oct. 1963.
- Prickett, T. A.** *See* Walton, W. C. 1137
- Prill, R. C.** *See* Johnson, A. I. 0335
- 0955 **Prill, R. C.; Johnson, A. I.** Centrifuge technique for determining time-drainage relations for a natural sand: Art. 236 in U.S. Geol. Survey Prof. Paper 450-E, p. E177-E178, Mar. 1963.
- 1482 **Princeton University.** Engineering and world water resources—Papers delivered at the 57th meeting of the Princeton University Conference, May 23-24, 1963: Princeton, N. J., Princeton Univ., 103 p., 1963.
- 1370 **Pugh, C. A.** The Central Arizona Project and Arizona's watershed program, in Arizona Water Resources Comm., Water conservation from mountains to deserts: Arizona Watershed Symposium. 7th, Phoenix, Ariz., 1963, Proc., p. 12-15, 1963.
- 1263 **Purdue University.** (and Indiana State Board of Health) Industrial Waste Conference, 17th, Lafayette, Indiana, May 1-3, 1962, Proceedings: Purdue Univ. Eng. Ext. Dept. Ser. 112, (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), 878 p., 1963.
- 0702 **Quakenbush, T. H.** The management of irrigation water...It is the key to our water problem: Irrig. Eng. and Maintenance, v. 13, no. 4, p. 16-17, 25, May 1963.
- 0703 **Quill, L. L.** Reflections on water resources research: Ground Water, v. 1, no. 2, p. 2-3, 48, Apr. 1963.
- 1101 **R.A. Taft San. Eng. Center.** Reference list of publications of the Robert A. Taft Sanitary Engineering Center, Section 3-Water supply and pollution control: U.S. Robert A. Taft Sanitary Eng. Center Tech. Rept. W63-1, 95 p., 1963.
- Raimundo, A. L.** *See* Arvola, W. A. 1237
- 0965 **Ramsden, H. T.** Preliminary streamflow, lake level, and meteorological data for typical stations in British Columbia from 1 October 1962 to March 1963, in Columbia Basin Water Forecast Comm. ann. mtg., 26th, Portland, Oregon, 1963, Proc.: Portland, Ore., U.S. Soil Conserv. Service, p. 9-11, July 1963.

- 0705 **Randich, P. G.** Geology and ground-water resources of the Linton-Strasburg area, Emmons County, North Dakota: North Dakota Water Conserv. Comm., North Dakota Ground-Water Studies 50, 53 p., 1963.
- 1455 **Randich, P. G.** Geology and ground-water resources near Berthold, Ward County, North Dakota: North Dakota Water Conserv. Comm., North Dakota Ground-Water Studies 46, 26 p., 1963.
- Ranga Raju, K. G.** *See* Garde, R. J. 0742
- 0706 **Rantz, S. E.** An empirical method of determining momentary discharge of tide-affected streams: U.S. Geol. Survey Water-Supply Paper 1586-D, p. D1-D28, Aug. 1963.
- 0707 **Rantz, S. E.** Snowmelt hydrology of the North Yuba River basin, California: Art. 108 in U.S. Geol. Survey Prof. Paper 475-C, p. C191-C193, Nov. 1963.
- Rantz, S. E.** *See* Hofmann, Walter. 1320
- Rantz, S. E.** *See* Hofmann, Walter. 1321
- 0708 **Raudkivi, A. J.** Study of sediment ripple formation: Am. Soc. Civil Engineers Proc. Paper 3692, Hydraulics Div. Jour., v. 89, no. HY6, p. 15-33, Nov. 1963.
- Rauert, W.** *See* Moser, H. 0958
- 0709 **Rausch, D. L.; Curry, R. B.** Effect of viscosity and zeta potential of bentonite suspensions on flow through porous media: Am. Soc. Agr. Engineers Trans. (Gen. Ed.), v. 6, no. 2, p. 167-169, Sept. 1963.
- 0710 **Rauzi, Frank; Smika, D. E.** Water intake on rangeland as affected by simulated grazing and fertilization: Jour. Range Management, v. 16, no. 3, p. 125-128, May 1963.
- 0711 **Rauzi, Frank.** Water intake and plant composition as affected by differential grazing on rangeland: Jour. Soil and Water Conserv., v. 18, no. 3, p. 114-116, May-June 1963.
- 0712 **Rawlins, S. L.; Gardner, W. H.** A test of the validity of the diffusion equation for unsaturated flow of soil water: Soil Sci. Soc. America Proc., v. 27, no. 5, p. 507-511, Sept.-Oct. 1963.
- 0713 **Rawson, Jack.** Solution of manganese dioxide by tannic acid: Art. 117 in U.S. Geol. Survey Prof. Paper 475-C, p. C218-C219, Nov. 1963.
- 0714 **Ray, H. A.; Young, L. E.** Areas of potential flood inundation, San Luis Rey River basin, California: California Dept. Water Resources Bull. 112, App. G, 21 p., July 1963.
- Ray, Satyabrata.** *See* Brindley, G. W. 0275
- 0715 **Rayner, F. A.** Water from Cretaceous sands in Cochran County, Texas: Ground Water, v. 1, no. 4, p. 39-41, Oct. 1963.
- Reade, H. L., Jr.** *See* Knowles, D. B. 0382
- Reed, J. E.** *See* Sniegocki, R. T. 0863
- Reed, M. D.** *See* Swanson, H. V. 1016
- 1272 **Reed, P. W.** Comprehensive planning for water quality management, in Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112, (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 602-607, 1963.

- Reeder, H. O.** *See* Conover, C. S. 0398
- 0716 **Reeves, C. C., Jr.** Subterranean natural brines produce sodium sulphate in west Texas: *Ground Water*, v. 1, no. 3, p. 35-36, July 1963.
- Reeves, R. D.** *See* Baker, E. T., Jr. 1457
- Reginato, R. J.** *See* vanBavel, C. H. M. 1106
- 0717 **Reich, B. M.** Short-duration rainfall-intensity estimates and other design aids for regions of sparse data: *Jour. Hydrology* [Amsterdam], v. 1, no. 1, p. 3-28, 1963.
- Reid, V. H.** *See* Lusby, G. C. 0508
- Reigold, P. C.** *See* McGinnis, L. D. 0443
- 0927 **Reiland, L. J.; Haynes, G. L., Jr.** Flow characteristics of New Mexico streams—Flow-duration, high-flow, and low-flow tables for selected stations through water year 1959: *New Mexico State Engineer Spec. Rept.*, 342 p., 1963.
- 0930 **Reinhart, K. G.; Eschner, A. R.; Trimble, G. R., Jr.** Effect on streamflow of four forest practices in the mountains of West Virginia: *U.S. Forest Service Research Paper NE-1*, 79 p., 1963.
- Reinhart, K. G.** *See* Trimble, G. R., Jr. 1058
- 0718 **Reisenauer, A. E.** Methods for solving problems of multidimensional, partially saturated steady flow in soils: *Jour. Geophys. Research*, v. 68, no. 20, p. 5725-5733, Oct. 15, 1963.
- 1331 **Reisenauer, A. E.; Nelson, R. W.; Knudsen, C. N.** Steady Darcian transport of fluids in heterogeneous partially saturated porous media, part 2—The computer program: *U.S. Atomic Energy Comm. Research and Devel. Rept. HW-72335 PT2*, 88 p., Oct. 1963. [Available from U.S. Dept. Commerce, Office of Tech. Services.]
- Reisenauer, A. E.** *See* Nelson, R. W. 1419
- Remson, Irwin.** *See* Wallo, E. M. 1097
- Renn, C. E.** *See* O'Connor, J. T. 0569
- 1280 **Renn, C. E.** Biologists as organization men in water resources, in *Great Lakes Research Conf.*, 8th, Ann Arbor, Michigan, 1963, Proc.: Michigan Univ. Great Lakes Research Div. Pub. 10, p. 269-272, 1963.
- 0719 **Replogle, J. A.; Johnson, L. C.** Improved measuring and sampling equipment for sediment-laden runoff: *Am. Soc. Agr. Engineers Trans. (Gen. Ed.)*, v. 6, no. 3, p. 259-261, Nov. 1963.
- Resch, W. F.** *See* Wilcox, L. V. 1194
- Rettman, P. L.** *See* Cronin, J. G. 0150
- 0720 **Revelle, Roger.** Water: *Sci. Am.*, v. 209, no. 3, p. 92-108, Sept. 1963.
- 0932 **Revelle, Roger.** Water-resources research in the Federal Government: *Science*, v. 142, no. 3595, p. 1027-1033, Nov. 1963.
- Reynolds, H. G.** *See* Rich, L. R. 0721
- Reynolds, L. C.** *See* Amstutz, R. W. 0054

- 1251 **Reynolds, T. D.** Sorption and release of radionuclides by sediments, in Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm., Div. Tech. Inf. TID-7664, p. 127-148, July 1963.
- Reynolds, W. N.** See Osborn, H. R. 0577
- Rhodehamel, E. C.** See Lang, S. M. 0293
- Rhodes, D. W.** See Wilding, M. W. 1460
- Rice, Leonard.** See Mao, Shieh-Wen. 0522
- Rice, R. C.** See Bouwer, Herman. 0262
- Rice, R. M.** See Hill, L. W. 0942
- Rice, R. M.** See Krammes, J. S. 1372
- 0722 **Rich, G. R.** Hydraulic transients, 2d ed: New York, Dover Publications, 409 p., 1963.
- 0721 **Rich, L. R.; Reynolds, H. G.** Grazing in relation to runoff and erosion on some Chaparral watersheds of central Arizona: Jour. Range Management, v. 16, no. 6, p. 322-326, Nov. 1963.
- Richardson, E. V.** See Simons, D. B. 0894
- 1319 **Richardson, R. M.** Significance of climate in relation to the disposal of radioactive waste at shallow depth below ground: La Retention et la Migration des Ions Radioactifs dans les Sols (Retention and migration of Radioactive Ions in Soils), Colloque Internat., France 1962, Proc., p. 207-211, 1963.
- 0723 **Richter, R. C.** Permeability, coefficients of transmissibility, coefficients of storage; Methods of determination and application to ground water problems, annotated bibliography through 1961: Sacramento, California Dept. Water Resources, 60 p., App. 15 p., April 1963.
- 1295 **Rieckmann, Martin.** Evaluation of reservoir rocks of low permeability, in Drilling and production: World Petroleum Cong., 6th, Frankfort-on-Main, 1963, Proc., Sec. II, p. 101-116, 1963.
- Riehl, Herbert.** See Marlatt, William. 1485
- Rieke, H. H., III.** See Chilingar, G. V. 0254
- 1281 **Risley, Clifford, Jr.** Radioactivity levels in Lake Michigan, a preliminary report, in Great Lakes Research Conf., 6th, Ann Arbor, Michigan, 1963, Proc.: Michigan Univ. Great Lakes Research Div. Pub. 10, p. 124-132, 1963.
- 0724 **Roberson, C. E.** (and others) Differences between field and laboratory determinations of pH, alkalinity, and specific conductance of natural water: Art. 115 in U.S. Geol. Survey Prof. Paper 475-C, p. C212-C215, Nov. 1963.
- Roberto, T. T.** See Noll, D. C. 0559
- 0725 **Roberts, M. C.** Some empirical regularities of the Humber River drainage net: Iowa Acad. Sci. Proc. v. 70, p. 321-326, 1963.
- 0726 **Roberts, W. J.** Evaporation and transpiration, in United States National report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 556-558, June 1963.
- Robertson, J. B.** See Page, H. G. 0584

- Robertson, J. B.** *See* Wayman, C. H. 1161
- Robertson, J. B.** *See* Wayman, C. H. 1162
- Robertson, J. B.** *See* Wayman, C. H. 1163
- Robertson, J. B.** *See* Wayman, C. H. 1164
- Robertson, J. B.** *See* Wayman, C. H. 1165
- Robertson, J. B.** *See* Wayman, C. H. 1166
- Robertson, J. B.** *See* Wayman, C. H. 1169
- Robertson, J. O., Jr.** *See* Chilingar, G. V. 0254
- 0727 **Robinove, C. J.; Langford, R. H.** Geology and ground-water resources of the Greybull River-Dry Creek area, Wyoming: U.S. Geol. Survey Water-Supply Paper 1596, 88 p., Apr. 1963.
- 0728 **Robinove, C. J.** Photography and imagery—A clarification of terms: Photogramm. Eng., v. 29, no. 5, p. 880-881, Sept. 1963.
- 0729 **Robinove, C. J.; Cummings, T. R.** Ground-water resources and geology of the Lyman-Mountain View area, Uinta County, Wyoming: U.S. Geol. Survey Water-Supply Paper 1669-E, p. E1-E43, Oct. 1963.
- 0931 **Robinove, C. J.; Berry, D. W.** Availability of ground water in the Bear River Valley, Wyoming, with a section on Chemical quality of the water, by J. G. Conner: U.S. Geol. Survey Water-Supply Paper 1539-V, p. V1-V44, Mar. 1963.
- 1067 **Robinove, C. J.** What's happening to water? in Smithsonian report for 1962: Smithsonian Inst. Pub. 4552, p. 375-389, 1963.
- Robins, J. S.** *See* Willis, W. O. 1139
- Robins, M. L.** *See* Schroepfer, G. J. 0920
- 0933 **Robinson, A. R.** (and others) Distribution, control, and measurement of irrigation water on the farm: U.S. Dept. Agriculture Misc. Pub. 926, 27 p., 1963.
- Robinson, B. P.** *See* Barker, F. B. 0097
- Robinson, G. M.** *See* Skibitzke, H. E., 0850
- 0730 **Robinson, J. W.; Price, Don.** Ground water in the Prineville area, Crook County, Oregon: U.S. Geol. Survey Water-Supply Paper 1619-P, p. P1-P49, Apr. 1963.
- 0731 **Rocco, G. G.; Broeker, W. S.** The vertical distribution of Cesium 137 and Strontium 90 in the oceans: Jour. Geophys. Research, v. 68, no. 15, p. 4501-4512, Aug. 1, 1963.
- 0732 **Roderick, G. L.; Demirel, Turgut.** Expansion of montmorillonite due to adsorption of water vapor: Iowa Acad. Sci. Proc. v. 70, p. 280-289, 1963.
- Rodgers, G. K.** *See* Anderson, D. V. 1283
- 0733 **Rodis, H. G.** Geology and occurrence of ground water in Lyon County, Minnesota: U.S. Geol. Survey Water-Supply Paper 1619-N, p. N1-N41, Nov. 1963.
- 0734 **Rodis, H. G.; Iskander, Wilson.** Ground water in the Nahud outlier of the Nubian Series, Kordofan Province, Sudan: Art. 49 in U.S. Geol. Survey Prof. Paper 475-B, p. B179-B181, June 1963.

- Roether, W.** *See* Münnich, K. O. 0973
- Roether, W.** *See* Vogel, J. C. 0974
- Rogers, S. M.** *See* Hodges, A. L., Jr. 1347
- Rollo, J. R.** *See* Cardwell, G. T. 0034
- 0735 **Romano, A. H.; Safferman, R. S.** Studies on actinomycetes and their odors: Am. Water Works Assoc. Jour., v. 55, no. 2, p. 169-176, Feb. 1963.
- Ronald, G. W.** *See* Morris, R. L. 0422
- Root, P. J.** *See* Warren, J. E. 1154
- Rorabaugh, M. I.** *See* Cooper, H. H., Jr. 0404
- Rorabaugh, M. I.** *See* Cooper, H. H., Jr. 0513
- 0736 **Rorabaugh, M. I.** Streambed percolation in development of water supplies, *in* Bentall, Ray, compiler, Methods of collecting and interpreting ground-water data: U.S. Geol. Survey Water-Supply Paper 1544-H, p. H47-H62, Dec. 1963.
- Rosen, A. A.** *See* Middleton, F. M. 1270
- Rosen, P.** *See* Dupont, K. C. 0194
- 0737 **Rosenschein, J. S.** Recharge rates of principal aquifers in Lake County, Indiana: Ground Water, v. 1, no. 4, p. 13-20, Oct. 1963.
- Rosenschein, J. S.** *See* Watkins, F. A., Jr. 1157
- 0738 **Rosini, Ezio.** A quantitative definition of the meaning of constancy and steadiness of climate, *in* Changes of climate: UNESCO Arid Zone Research Ser., v. 20, p. 45-48, 1963.
- Rouleau, W. T.** *See* Hornbeck, R. W. 0694
- 0739 **Rouse, Hunter.** On the role of eddies in fluid motion: Am. Scientist, v. 51, no. 3, p. 285-374, Sept. 1963.
- 0896 **Rowe, J. J.** Releasing-addition method for the flame-photometric determination of calcium in thermal waters: Geochim. et Cosmochim. Acta, v. 27, no. 8, p. 915-923, Aug. 1963.
- 0839 **Rowe, P. B.** Streamflow increases after removing woodland-reparian vegetation from a southern California watershed: Jour. Forestry, v. 61, no. 5, p. 365-370, May 1963.
- 1377 **Roy, R.** A comparison of groundwater hydrology in Pleistocene, Paleozoic and Precambrian rocks of the Quebec St. Lawrence lowlands and vicinity, *in* Canada National Research Council, Groundwater, Proceedings of Hydrology Symposium No. 3, Calgary, Alberta, 1962: Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 35-48, 1963.
- 0897 **Rubin, J.; Steinhardt, R.** Soil water relations during rain infiltration. I, Theory: Soil Sci. Soc. America Proc., v. 27, no. 3, p. 246-251, May-June 1963.
- Ruggles, F. H., Jr.** *See* Edelen, G. W., Jr. 0207
- 0898 **Rukstad, L. R.** Water supply for the City of Lesterville: South Dakota Geol. Survey Spec. Rept. 23, 16 p., June 1963.

- 0899 **Rumer, R. R., Jr.; Harleman, D. R. F.** Intruded salt-water wedge in porous media: Am. Soc. Civil Engineers Proc. Paper 3707, Hydraulics Div. Jour., v. 89, no. HY6, p. 193-220, Nov. 1963.
- Rumer, R. R., Jr. *See* Harleman, D. R. F. 1476
- Rumer, R. R., Jr. *See* Harleman, D. R. F. 1477
- 0900 **Rush, F. E.; Eakin, T. E.** Ground-water appraisal of Lake Valley in Lincoln and White Pine Counties, Nevada: Nevada Dept. Conserv. and Nat. Resources, Ground-Water Resources—Reconn. Ser. Rept. 24, 29 p., Dec. 1963.
- 0901 **Russell, R. R.** Ground-water levels in Illinois through 1961: Illinois State Water Survey Rept. Inv. 45, 51 p., 1963.
- 0902 **Ruttner, Franz.** Fundamentals of limnology, 3d ed.: Toronto, Ontario, Toronto Univ. Press, 295 p., 1963.
- 1382 **Sadler, L. D. M.** The shallow groundwater table and its relationship to irrigation development, in Canada National Research Council, Groundwater, Proceedings of Hydrology Symposium No. 3, Calgary, Alberta, 1962: Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 335-363, 1963.
- Safadi, Chafic. *See* Burdon, D. J. 0011
- Safferman, R. S. *See* Romano, A. H. 0735
- Safranko, John. *See* VanHall, C. E. 1107
- 1296 **Saito, Hikaru.** Capillary pressure measurement of porous medium by vapor pressure method, in Drilling and production: World Petroleum Cong., 6th, Frankfort-on-Main, 1963, Proc., Sec. II, p. 155-162, 1963.
- 0840 **Sampayo, F. F.; Wilke, H. R.** Temperature and phosphates as ground-water tracers: Ground Water, v. 1, no. 4, p. 36-38, Oct. 1963.
- 1433 **Sandberg, G. W.** Ground-water data, Beaver, Escalante, Cedar City, and Parowan Valleys, parts of Washington, Iron, Beaver, and Millard Counties, Utah: Utah State Engineer Basic-Data Rept. 6, 26 p., 1963.
- 0903 **Sanders, J. E.** Concepts of fluid mechanics provided by primary sedimentary structures: Jour. Sed. Petrology, v. 33, no. 1, p. 173-179, Mar. 1963.
- 1469 **Saraf, D. N.; Witherspoon, P. A.; Cohen, L. H.** Diffusion coefficients of hydrocarbons in water—Method for measuring: Science, v. 142, no. 3594, p. 955-956, Nov. 1963.
- Savage, J. C. *See* Paterson, W. S. B. 0589
- Savage, J. C. *See* Paterson, W. S. B. 0590
- 0905 **Savage, J. C.; Paterson, W. S. B.** Borehole measurements in the Athabasca glacier: Jour. Geophys. Research, v. 68, no. 15, p. 4521-4536, Aug. 1, 1963.
- 0906 **Savre, W. C.** Determination of a more accurate porosity and mineral composition in complex lithologies with the use of the sonic, neutron and density surveys: Jour. Petroleum Technology, v. 15, no. 9, p. 945-959, Sept. 1963.
- 0907 **Sawyer, R. M.** Effect of urbanization on storm discharge and ground-water recharge in Nassau County, New York: Art. 106 in U.S. Geol. Survey Prof. Paper 475-C, p. C185-C187, Nov. 1963.
- 0908 **Sayre, W. W.; Guy, H. P.; Chamberlain, A. R.** Uptake and transport of radionuclides by stream sediments: U.S. Geol. Survey Prof. Paper 433-A, p. A1-A35, Apr. 1963.

- 1487 **Sayre, W. W.; Hubbell, D. W.** Transport of radionuclides in fresh water Dispersal of bed sediments. *in* Kornegay, B. H., and others, editors. *Transport of radionuclides in fresh water systems:* U.S. Atomic Energy Comm., Div. Tech. Inf. TID-7664, p. 327-352, July 1963.
- 0909 **Scalapino, R. A.** Ground-water conditions in the Carrizo sand in Texas: *Ground Water*, v. 1, no. 4, p. 26-32, Oct. 1963.
- 0910 **Sceva, J. C.; DeBow, Robert.** Ground-water levels: Oregon State Engineer Ground-water Rept. 4, 71 p., 1963.
- Sceva, J. E. *See* Kinnison, H. B. 0373
- Schaake, J. C., Jr. *See* Knapp, J. W. 0381
- 0911 **Scheidegger, A. E.** Dynamic similarity in ground water flow with a free surface: *Canadian Jour. Physics*, v. 41, no. 1, p. 90-94, Jan. 1963.
- 1378 **Scheidegger, A. E.** Theoretical aspects of quantitative groundwater flow studies, *in* Canada National Research Council, *Groundwater, Proceedings of Hydrology Symposium No. 3*, Calgary, Alberta, 1962: Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 107-137, 1963.
- 1387 **Scheidegger, A. E.** Dynamical similarity in erosional processes: *Geofisica Pura E Applicata-Milano*, v. 56, (1963/III), p. 58-66, 1963.
- 0912 **Schenck, Hilbert, Jr.** Simulation of the evolution of drainage-basin networks with a digital computer: *Jour. Geophys. Research*, v. 68, no. 20, p. 5739-5745, Oct. 15, 1963.
- Schiff, Leonard. *See* Behnke, J. J. 0105
- 1358 **Schiff, Leonard.** (editor) *Ground Water Recharge and Ground Water Basin Management Conference*, Berkeley, Calif., June 26-27, 1963, *Proceedings*: Fresno, Calif., U.S. Dept. Agriculture, Ground Water Recharge Center, 300 p. (papers individually paged), Nov. 1963. [Individual papers not cited.]
- Schiner, G. R. *See* Hansen, A. J., Jr. 0807
- 0914 **Schiner, G. R.** Ground-water exploration and test pumping in the Halma-Lake Bronson area, Kittson County, Minnesota: U.S. Geol. Survey Water-Supply Paper 1619-BB, p. BB1-BB38, July, 1963.
- 0843 **Schmid, R. W.** Ground water in the vicinity of Dickinson, Stark County, North Dakota—SWCC Project No. 748; North Dakota Water Conserv. Comm., North Dakota Ground-Water Studies 51, 34 p., 1963.
- 0844 **Schmid, R. W.** Ground water in the vicinity of Ryder, Ward County, North Dakota, S.W.C.C. Project No. 931; North Dakota Water Conserv. Comm., North Dakota Ground-Water Studies, 53, 33 p., 1963.
- 0915 **Schmidt, Roy H.** Calculated hydraulic conductivity as a measure of soil compaction: *Am. Soc. Agr. Engineers Trans. (Gen. Ed.)*, v. 6, no. 3, p. 177-181, 185, Nov. 1963.
- 0916 **Schmudde, T. H.** Some aspects of land forms of the lower Missouri River flood plain: *Assoc. Am. Geographers Annals*, v. 53, no. 1, p. 60-73, Mar. 1963.
- Schneider, Robert. *See* Jones, J. R. 0347
- Schneider, Robert. *See* Norvitch, R. F. 0549
- 0841 **Schneider, Robert.** Ground-water provinces of Brazil: U.S. Geol. Survey Water-Supply Paper 1663-A, p. A1-A14, 1963.

- Schneider, W. J.** See Giusti, E. V. 0779
- 0917 **Scholl, D. W.** Techniques for removing interstitial water from coarse-grained sediments for chemical analyses: *Sedimentology*, v. 2, no. 2, p. 156-163, June 1963.
- 0918 **Scholl, D. W.** Sedimentation in modern coastal swamps, southwestern Florida: *Am. Assoc. Petroleum Geologists Bull.*, v. 47, no. 8, p. 1581-1603, 1963.
- 1448 **Schroeder, M. C.; Jennings, A. R.** Laboratory studies of the radioactive contamination of aquifers: Livermore, Calif. Univ. Lawrence Radiation Lab. UCRL-13074, 54 p., app. 66 p., June 1963. [Available from U.S. Dept. Commerce, Office of Tech. Services.]
- 0920 **Schroepfer, G. J.; Robins, M. L.; Susag, R. H.** The research program on the Mississippi River in the vicinity of Minneapolis and St. Paul: *Internat. Jour. Air and Water Pollution*, v. 7, nos. 4-5, p. 373-397, June 1963.
- 0621 **Schufle, J. A.** Minerals and energy sources in the arid west, chap. 7 in Hodge, Carle, editor, *Aridity and man*: Am. Assoc. Adv. Science Pub. 74, p. 173-213, 1963.
- Schumacher, G. J.** See Whitford, L. A. 1188
- Schumann, H. H.** See Brown, S. G. 1478
- 0921 **Schumm, S. A.; Lusby, G. C.** Seasonal variation of infiltration capacity and runoff on hillslopes in western Colorado: *Jour. Geophys. Research*, v. 68, no. 12, p. 3655-3666, June 15, 1963.
- 0922 **Schumm, S. A.; Lichty, R. W.** Channel widening and flood-plain construction along Cimarron River in southwestern Kansas: *U.S. Geol. Survey Prof. Paper* 352-D, p. 71-88, Oct. 1963.
- 0923 **Schumm, S. A.** The disparity between present rates of denudation and orogeny: *U.S. Geol. Survey Prof. Paper* 454-H, p. H1-H13, July 1963.
- 0924 **Schumm, S. A.** A tentative classification of alluvial river channels: *U.S. Geol. Survey Circ.* 477, 10 p., Aug. 1963.
- Schupp, R. G.** See Feulner, A. J. 0642
- Schwab, G. O.** See Horn, D. L. 0693
- Schwab, G. O.** See Harrold, L. L. 0819
- 0842 **Schwab, G. O.; Thiel, T. J.** Hydrologic characteristics of tile and surface drainage systems with grass cover: *Am. Soc. Agr. Engineers Trans. (Gen. Ed.)*, v. 6, no. 2, p. 89-92, Sept. 1963.
- 0876 **Schwartz, G. M.; Thiel, G. A.** Minnesota's rocks and waters: Minneapolis, Minnesota Univ. Press., 366 p. (Also published as *Minnesota Geol. Survey Bull.* 37), 1963.
- 0877 **Schwerdtfeger, Peter.** Theoretical derivation of the thermal conductivity and diffusivity of snow: *Internat. Assoc. Sci. Hydrology Pub.* 61, p. 75-81, 1963.
- 0878 **Schwob, H. H.** Cedar River basin floods: *Iowa Highway Research Board Bull.* 27, 57 p., June 1963.
- 0879 **Scott, G. T. G.** Water resources control legislation in Great Britain: *Am. Water Works Assoc. Jour.*, v. 55, no. 8, p. 971-978, Aug. 1963.

**Scott, J. C.** *See* Knowles, D. B. 0382

1384 **Scott, J. O.** The effect of vertical fractures on transient pressure behavior of wells: *Jour. Petroleum Technology*, v. 15, no. 12, p. 1365-1369, Dec. 1963.

0880 **Scott, J. S.** Groundwater potential, Blood Indian Reserve, Alberta: Canada Geol. Survey Paper 63-15, 18 p., 1963.

**Scott, V. H.** *See* Abu-Zied, M. A. 0056

**Scott, V. H.** *See* Dvoracek, M. J. 0202

**Seaber, P. R.** *See* Gill, H. E. 0777

0882 **Seaber, P. R.** Chloride concentrations of water from wells in the Atlantic Coastal Plain of New Jersey, 1923-61: New Jersey Div. Water Policy and Supply Spec. Rept. 22, 250 p., 1963.

**Seabloom, R. W.** *See* Sylvester, R. O. 0677

**Seaders, John.** *See* Delay, W. H. 1363

0883 **Seedlock, R. F.** Water resources of the Missouri Basin: Am. Water Works Assoc. Jour., v. 55, no. 9, p. 1097-1102, Sept. 1963.

1385 **Segerstrom, Kenneth; Casertano, Lorenzo; Galli, Carlos.** Eruptions of water and sand resulting from an earthquake near Concepción, Chile: Art. 35 in U.S. Geol. Survey Prof. Paper 475-B, p. B131-B134, June 1963.

**Segesman, F.** *See* Doll, H. G. 1297

0884 **Selim, M. A.** Potential distribution in a semi-infinite aquifer due to flow through a nonpenetrating well: *Jour. Geophys. Research*, v. 68, no. 24, p. 6543-6545, Dec. 15, 1963.

**Sen, B. N.** *See* Taylor, G. C., Jr. 1028

0885 **Sendlein, L. V. A.** A geophysical reconnaissance method for the location of buried valleys: *Iowa Acad. Sci. Proc.*, v. 70, p. 272-279, 1963.

1475 **Sever, C. W.** Ground-water resources of Bainbridge Air Base, Decatur County, Georgia: *Georgia Mineral Newsletter*, v. 16, nos. 1-2, p. 39-43, Spring-Summer 1963.

**Seward, F. A., Jr.** *See* Heinricks, W. E., Jr. 0832

**Shafer, G. H.** *See* Cronin, J. G. 0150

**Sharp, A. L.** *See* Allis, J. A. 0061

**Sharp, A. L.** *See* Neuberger, J. W. 0464

**Shaughnessy, J. A.** *See* Archer, R. J. 0043

**Shedd, P. H., Jr.** *See* Tipton, V. B. 1054

**Shelby, Wanda.** *See* Hughes, L. S. 0697

0887 **Shen, John.** An analog solution of the turbulent-diffusion equation for open-channel flow: Art. 233 in U.S. Geol. Survey Prof. Paper 450-E, p. E169-E171, Mar. 1963.

1386 **Shen, John.** A method of determining the storage-outflow characteristics of nonlinear reservoirs: Art. 232 in U.S. Geol. Survey Prof. Paper 450-E, p. E167-E168, Mar. 1963.

- Sherman, A. L.** *See* Grossman, Max. 0792
- Sherwood, C. B.** *See* Leach, S. D. 0306
- 0888 **Sherwood, C. B.; Klein, Howard.** Use of analog plotter in water-control problems: Ground Water, v. 1, no. 1, p. 8-10, 15, Jan. 1963.
- 0889 **Sherwood, C. B.; Klein, Howard.** Saline ground water in southern Florida: Ground Water, v. 1, no. 2, p. 4-8, Apr. 1963.
- Show, T. N.** *See* Harvey, E. J. 0823
- Shrewsbury, C. L.** *See* Koberg, G. E. 0384
- 0890 **Shumskiy, P. A.; Zotikov, L. A.** On bottom melting of the Antarctic ice shelves: Internat. Assoc. Sci. Hydrology Pub. 61, p. 225-231, 1963.
- Siddoway, F. H.** *See* Cheipil, W. S. 0251
- 0891 **Siever, Raymond.** Organic geochemistry of silica, chap. 14, of Breger, I. A., ed., Organic Geochemistry: New York, Macmillan, p. 579-595, 1963.
- 1004 **Siliceo, E. P.; Ahumada, A. A.; Mosino, P. A.** Twelve years of cloud seeding in the Necaxa watershed, Mexico: Jour. Appl. Meteorology, v. 2, no. 3, p. 311-323, June 1963.
- 1474 **Silker, W. B.** Reducing radioisotope concentrations in reactor effluent by high coagulant feed: Am. Water Works Assoc. Jour., v. 55, no. 3, p. 355-368, May 1963.
- 0893 **Simon, A. L.** Travel time of waves in backwaters: Am. Soc. Civil Engineers Proc. Paper 3689, Hydraulics Div. Jour., v. 89, no. HY6, p. 1-13, Nov. 1963.
- 0894 **Simons, D. B.; Richardson, E. V.; Haushild, W. L.** Some effects of fine sediment on flow phenomena: U.S. Geol. Survey Water-Supply Paper 1498-G, p. G1-G47, May 1963.
- 0968 **Simons, W. D.** Discussion of 1962 runoff and forecasts—Outcome of 1962 volume forecasts, in Columbia Basin Water Forecast Comm. ann. mtg., 26th, Portland, Oregon, 1963, Proc.: Portland, Ore., U.S. Soil Conserv. Service, p. 1-6, July 1963.
- 0845 **Sinclair, W. C.** Ground-water appraisal of the Black Rock Desert area, northwestern Nevada: Nevada Dept. Conserv. and Nat. Resources, Ground-Water Resources—Reconn. Ser. Rept. 20, 32 p., Oct. 1963.
- 0895 **Sinclair, W. C.; Loeltz, O. J.** Ground-water conditions in the Fernley-Wadsworth area, Churchill, Lyon, Storey, and Washoe Counties, Nevada: U.S. Geol. Survey Water-Supply Paper 1619-AA, p. AA1-AA22, Apr. 1963.
- 1003 **Sinclair, W. C.** Ground-water appraisal of the Long Valley—Massacre Lake region, Washoe County, Nevada, with a section on The soils of Long Valley, by R. L. Malchow: Nevada Dept. Conserv. and Nat. Resources, Ground-Water Resources—Reconn. Ser. Rept. 15, 26 p., May 1963.
- 1005 **Sinclair, W. C.** Ground-water appraisal of Duck Lake Valley, Washoe County, Nevada, with a section on The soils of Duck Lake Valley, by Richard L. Malchow: Nevada Dept. Conserv. and Nat. Resources, Ground-Water Resources—Reconn. Ser. Rept. 17, 19 p., June 1963.
- 1434 **Sinclair, W. C.** Ground-water appraisal of the Pueblo Valley-Continental Lake region, Humboldt County, Nevada: Nevada Dept. Conserv. and Nat. Resources, Ground-water Resources—Reconn. Ser. Rept. 22, 25 p., Nov. 1963.

- 0846 **Singhal, B. B. S.** Occurrence and geochemistry of ground water in the coastal region of Midnapur, West Bengal, India: Econ. Geology, v. 58, no. 3, p. 419-433, May 1963.
- Sinnokrot, Ali.** See Chilingar, G. V. 0253
- Sisco, H. G.** See Mundorff, M. J. 0434
- 0847 **Sittner, W. T.** Extension of rating curves by field surveys: Am. Soc. Civil Engineers Proc. Paper 3444, Hydraulics Div. Jour., v. 89, no. HY2, p. 1-9, Mar. 1963.
- 0848 **Skau, C. M.; Swanson, R. H.** An improved heat pulse velocity meter as an indicator of sap speed and transpiration: Jour. Geophys. Research, v. 68, no. 16, p. 4743-4749, Aug. 15, 1963.
- Skelton, John.** See Callahan, J. A. 0030
- 0622 **Skibitzke, H. E.; Brown, R. H.; Harshbarger, J. W.** Water and its use, chap. 6 in Hodge, Carle, editor, Aridity and man: Am. Assoc. Adv. Science Pub. 74, p. 145-172, 1963.
- 0849 **Skibitzke, H. E.** Determination of the coefficient of transmissibility from measurements of residual drawdown in a bailed well, in Bentall, Ray, compiler, Methods of determining permeability, transmissibility and drawdown: U.S. Geol. Survey Water-Supply Paper 1536-I, p. 293-298, Dec. 1963.
- 0850 **Skibitzke, H. E.; Robinson, G. M.** Dispersion in ground water flowing through heterogeneous materials: U.S. Geol. Survey Prof. Paper 386-B, p. B1-B3, May 1963.
- 0851 **Skibitzke, H. E.** The use of analogue computers for studies in ground-water hydrology: Inst. Water Engineers, Jour., v. 17, no. 3, p. 216-230, May 1963.
- 0852 **Skinner, M. M.** Colorado ground water levels, Spring, 1963: Fort Collins, Colorado State Univ. Agr. Expt. Sta., Civil Eng. Sec., 11 p., 1963.
- Skoustad, M. W.** See Fishman, M. J. 0752
- 0853 **Skoustad, M. W.; Horr, C. A.** Occurrence and distribution of strontium in natural water: U.S. Geol. Survey Water-Supply Paper 1496-D, p. 55-97, Feb. 1963.
- 0854 **Skoustad, M. W.; Fishman, M. J.** Water analysis: Anal. Chemistry, v. 35, no. 5, p. 179R-204R, Apr. 1963.
- Skrinde, R. T.** See Spicher, R. G. 0870
- Sloss, Raymond.** See Newcome, Roy, Jr. 0471
- Small, J. B.** See Davis, G. H. 1466
- 0936 **Smerdon, E. T.** Subsurface water distribution in surface irrigation: Am. Soc. Civil Engineers Proc. Proc. Paper 3445, Irrig. and Drainage Div. Jour., v. 89, no. IR 1, p. 1-15, Mar. 1963.
- Smika, D. E.** See Rauzi, Frank. 0710
- 1045 **Smiles, D. E.; Youngs, E. G.** A multiple-well method for determining the hydraulic conductivity of a saturated soil in situ: Jour. Hydrology [Amsterdam], v. 1, no. 4, p. 279-287, 1963.
- Smiles, D. E.** See Youngs, E. G. 1228
- Smith, D. B.** See Clayton, C. G. 1414

- 1415 **Smith, D. B.; Clark, W. E.** An investigation of the hydraulics of an underground pool with iodine-131, in Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency, Proc. Ser. 71, p. 77-88, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- 0855 **Smith, D. D.** Organization and presentation of environmental data for Office of Civil Defense use—A feasibility study: U.S. Army Corps of Engineers, Waterways Expt. Sta., Vicksburg, Miss., Tech. Rept. 5-622, 29 p., App. A-E, Apr. 1963.
- 0856 **Smith, E. J.; Adderly, E. E.; Walsh, D. T.** A cloud-seeding experiment in the Snowy Mountains, Australia: Jour. Appl. Meteorology, v. 2, no. 3, p. 324-332, June 1963.
- 0857 **Smith, F. A. (compiler)** Nebraska water survey test hole report 5, York County: Nebraska Univ., Conserv. and Survey Div., Nebraska Water Survey Test Hole Rept. 5, 60 p., July 1963.
- 0860 **Smith, R. C.** Relation of screen design to the design of mechanically efficient wells: Am. Water Works Assoc. Jour., v. 55, no. 5, p. 609-614, May 1963.
- 0858 **Smith, R. E.** Estancia Valley, N. Mex., in Thomas, H. E., and others, Effects of drought in basins of interior drainage: U.S. Geol. Survey Prof. Paper 372-E, p. E8-E12, Dec. 1963.
- 1288 **Smith, R. L.** Institutional programs to meet water resources needs: Texas A and M Univ., Water Resources Inst., Water for Texas Conf., 8th ann., College Station, Texas, 1963, Proc., p 26-29, 1963.
- 0859 **Smith, Ralph E.; Gates, J. S.** Ground-water conditions in the southern and central parts of the East Shore area, Utah, 1953-1961: Utah Geol. and Mineralog. Survey Water-Resources Bull. 2, 48 p., July 1963.
- 0861 **Smith, W. O.** Review of, "Theory of ground-water movement" by P. Ya. Polubarinova-Kochina: Am. Geophys. Union Trans., v. 44, no. 3, p. 732-733, Sept. 1963.
- 0862 **Sniegocki, R. T.; Bayley, F. H., III; Engler, Kyle.** Equipment and controls used in studies of artificial recharge in the Grand Prairie region, Arkansas: U.S. Geol. Survey Water-Supply Paper 1615-C, p. C1-C39, Apr. 1963.
- 0863 **Sniegocki, R. T.; Reed, J. E.** Principles of siphons with respect to the artificial-recharge studies in the Grand Prairie region, Arkansas: U.S. Geol. Survey Water-Supply Paper 1615-D, p. D1-D19, July 1963.
- 0864 **Sniegocki, R. T.** Geochemical aspects of artificial recharge in the Grand Prairie region, Arkansas: U.S. Geol. Survey Water-Supply Paper 1615-E, p. E1-E41, Oct. 1963.
- 0865 **Sniegocki, R. T.** Problems in artificial recharge through wells in the Grand Prairie region, Arkansas: U.S. Geol. Survey Water-Supply Paper 1615-F, p. F1-F25, Dec. 1963.
- 0867 **Snyder, C. T.** Hydrology of stock-water development on the public domain of western Utah: U.S. Geol. Survey Water-Supply Paper 1475-N, 49 p., Mar. 1963.
- 1470 **Snyder, C. T.** Hydrology of stock-water development in the Ely Grazing District, Nevada: U.S. Geol. Survey Water-Supply Paper 1475-L, p. 383-441, Feb. 1963.
- 0868 **Sokol, Daniel.** Position and fluctuations of water level in wells perforated in more than one aquifer: Jour. Geophys. Research, v. 68, no. 4, p. 1079-1080, Feb. 15, 1963.

- 0623 **Sollers, A. A.** The first natural resource: Water, chap. 2 of Sollers, A. A., Ours is the Earth: New York, Holt, Rinehart and Winston, Inc., p. 17-42, 1963.
- Somers, W. P.** *See* Edelen, G. W., Jr. 0206
- 0869 **Soren, Julian.** The ground-water resources of Delaware County, New York: New York Water Resources Comm. Bull. GW-50, 59 p., 1963.
- Soren, Julian.** *See* Perlmutter, N. M. 1472
- Souders, V. L.** *See* Baker, B. B. 0087
- Souders, V. L.** *See* Baker, B. B. 0088
- Souders, V. L.** *See* Peckham, R. C. 0596
- 1435 **Soule, R. M.** Water supply as related to nuclear attack: New England Water Works Assoc. Jour., v. 77, no. 1, p. 10-15, Mar. 1963.
- Speir, W. H.** *See* Harrison, D. S. 0817
- 0870 **Spicher, R. G.; Skrindle, R. T.** Potassium permanganate oxidation of organic contaminants in water supplies: Am. Water Works Assoc. Jour., v. 55, no. 9, p. 1174-1194, Sept. 1963.
- 0871 **Spiegel, Zane; Baldwin, Brewster.** Geology and water resources of the Santa Fe area, New Mexico, with contributions by F. E. Kottlowski, and E. L. Barrows, and a section on Geophysics by H. A. Winkler: U.S. Geol. Survey Water-Supply Paper 1525, 258 p., Oct. 1963.
- 1262 **Spofford, W. O., Jr.; Thomas, H. A., Jr.** A least cost evaluation of low level liquid atomic waste treatment-simplified deterministic model, in Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm. Div. Tech. Inf. TID-7664, p. 353-389, July 1963.
- Sposito, Garrison.** *See* Anderson, D. M. 0049
- Sposito, Garrison.** *See* Anderson, D. M. 1467
- Sprague, M. L.** *See* Dugan, P. R. 0191
- Stacy, B. L.** *See* Wood, P. R. 1209
- 0872 **Stall, J. B.; Neill, J. C.** Calculated risks of impounding reservoir yield: Am. Soc. Civil Engineers Proc. Paper 3385, Hydraulics Div. Jour. v. 89, no. HY1, p. 25-34, Jan. 1963.
- 0873 **Stallman, R. W.** Electric analog of three-dimensional flow to wells and application to unconfined aquifers: U.S. Geol. Survey Water-Supply Paper 1536-H, p. 205-242, Jan. 1963.
- 0874 **Stallman, R. W.** Calculation of resistance and error in an electric analog of steady flow through nonhomogeneous aquifers: U.S. Geol. Survey Water-Supply Paper 1544-G, p. G1-G20, Feb. 1963.
- 0875 **Stallman, R. W.** Computation of ground-water velocity from temperature data, in Bentall, Ray, compiler, Methods of collecting and interpreting ground-water data: U.S. Geol. Survey Water-Supply Paper 1544-H, p. H36-H46, Dec. 1963.
- 0995 **Stallman, R. W.** Type curves for solution of single-boundary problems, in Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C45-C47, 1963.

- 0996 **Stallman, R. W.** Orientation of axes for calculating distribution of transmissibility from water-level altitudes: Art. 231 in U.S. Geol. Survey Prof. Paper 450-E, p. E165-E166, Mar. 1963.
- 0997 **Stead, F. W.** Tritium distribution in ground water around large underground fusion explosions: Science, v. 142, no. 3596, p. 1163-1165, Nov. 1963.
- Stefanelli, L. J. See Noll, C. A. 0558
- Steinhardt, R. See Rubin, J. 0897
- Stenger, V. A. See VanHall, C. E. 1107
- 0676 **Stephens, J. C.** (and others) Flow retardance by channel weeds and their control: Am. Soc. Civil Engineers Proc. Paper 3550, Irrig. and Drainage Div. Jour., v. 89, no. IR 2, p. 31-53, June 1963.
- 0998 **Stephens, J. C.; Stewart, E. H.** A comparison of procedures for computing evaporation and evapotranspiration: Internat. Assoc. Sci. Hydrology Pub. 62, p. 123-133, 1963.
- Stephens, J. C. See Weaver, H. A. 1170
- 1000 **Sterling, C. I., Jr.** Water resources in Barnstable County, Cape Cod, Massachusetts: Boston, Massachusetts Water Resources Comm., 87 p., July 1963.
- 1473 **Sterling, C. I., Jr.** Exploring areas of bewilderment in water resources: New England Water Works Assoc. Jour., v. 77, no. 3, p. 222-229, Sept. 1963.
- 1001 **Stermitz, Frank; Hanly, T. F.; Lane, C. W.** Water resources, in Mineral and water resources of Montana: U.S. 88th Cong., 1st sess., Senate Comm. Interior and Insular Affairs, Comm. Print, p. 137-166, 1963. [Also issued as Montana Bur. Mines and Geology Spec. Pub. 28.]
- 1002 **Stevens, P. R.** Examination of drill cuttings and application of resulting information to solving of field problems on the Navajo Indian Reservation, New Mexico and Arizona, in Bentall, Ray, compiler, Methods of collecting and interpreting ground-water data: U.S. Geol. Survey Water-Supply Paper 1544-H, p. H3-H13, Dec. 1963.
- 0990 **Stewart, E. H.; Powell, D. P.; Hammond, L. C.** Moisture characteristics of some representative soils of Florida: U.S. Agr. Research Service ARS 41-63, 53 p. 1963.
- Stewart, E. H. See Stephens, J. C. 0998
- 1007 **Stewart, H. G.** Records of wells and other water-resources data in Polk County, Florida: Florida Geol. Survey Inf. Circ. 38, 144 p., 1963.
- 1008 **Stewart, J. W.** Infiltration rates in weathered crystalline rocks at the Georgia Nuclear Laboratory, Dawson County, Georgia: Art. 220 in U.S. Geol. Survey Prof. Paper 450-E, p. E140-E142, Mar. 1963.
- 1009 **Stewart, J. W.; Herrick, S. M.** Emergency water supplies for the Atlantic area in a national disaster: Georgia Geol. Survey Spec. Pub. 1, 16 p., 1963.
- 1273 **Stierle, Harry; Orem, M. T.; Blair, R. D.** Establishing a water quality network station—a case history, in Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112, (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 666-681, 1963.
- 1010 **Stone, K. H.** Alaskan ice-dammed lakes: Assoc. Am. Geographers Annals, v. 53, no. 3, p. 332-349, Sept. 1963.
- 1011 **Stow, G. R. S.** Modern water-well drilling techniques in use in the United Kingdom: Ground Water, v. 1, no. 3, p. 3-12, July 1963.

- 1012 **Straka, G. C.; Miller, W. A.** Graphs of ground water levels in Minnesota, 1957-1961: Minnesota Div. Waters Bull. 18, 58 p., 1963.
- 1013 **Stramel, G. J.** Realistic application of aquifer test procedures: Public Works, v. 94, no. 5, p. 104-108, May 1963.
- Stringham, G. E.** See Bittinger, M. W. 1301
- 1014 **Stroup, E. D.; Lynn, R. J.** Atlas of salinity and temperature distributions in Chesapeake Bay 1952-1961, and seasonal averages 1949-1961: Johns Hopkins Univ., Chesapeake Bay Inst. Graph. Summ. Rept. 2, 410 p., Feb. 1963.
- Stulik, R. S.** See White, N. D. 1186
- Stumm, Warner.** See Weber, W. J., Jr. 1173
- 0991 **Sugden, W.** The hydrology of the Persian Gulf and its significance in respect to evaporite deposition: Am. Jour. Sci., v. 261, no. 8, p. 741-755, Oct. 1963.
- Sullivan, C. W.** See Bergman, D. L. 0117
- 1015 **Sun, P-C. P.; Criner, J. H.; Poole, J. L.** Large springs of east Tennessee: U.S. Geol. Survey Water-Supply Paper 1755, 52 p., Dec. 1963.
- 1300 **Sunada, D. K.; Todd, D. K.** Radial flow behavior of artificial recharge from surface cavities: Berkeley, California Univ., Hydraulic Lab., 57 p., 1963.
- Susag, R. H.** See Schroepfer, G. J. 0920
- 0992 **Swain, F. M.** Geochemistry of Humus, chap. 4 of Breger, I. A., editor, Organic Geochemistry: New York, Macmillan, p. 87-147, 1963.
- 1016 **Swanson, H. V.; Reed, M. D.** Comparison of flow formulas and friction factors for concrete pressure pipe: Am. Water Works Assoc., Jour., v. 55, no. 1, p. 67-80, Jan. 1963.
- Swanson, R. H.** See Skau, C. M. 0848
- 1017 **Swarner, L. R.; Hagood, M. A.** Irrigation trends in the Pacific Northwest: Agr. Eng., v. 44, no. 6, p. 304-307, June 1963.
- 0994 **Swartzendruber, Dale.** Non-Darcy behavior and the flow of water in unsaturated soils: Soil Sci. Soc. America Proc., v. 27, no. 5, p. 491-495, Sept.-Oct. 1963.
- 1018 **Swartzendruber, Dale.** Unsaturated flow of soil moisture, in United States National report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 573-574, June 1963.
- 1019 **Swarzenski, W. V.** Hydrogeology of northwestern Nassau and northeastern Queens Counties, Long Island, New York: U.S. Geol. Survey Water-Supply Paper 1657, 90 p., Feb. 1963.
- 1020 **Swenson, H. A.** Purpose and operation of USGS water quality networks: Am. Water Works Assoc. Jour., v. 55, no. 8, p. 1019-1026, Aug. 1963.
- 1303 **Swenson, H. A.** Sediment yields of streams in the United States: Soil Conserv. Soc. America Ann. Mtg., 18th, Logan, Utah, Aug. 25-28, 1963, Proc., p. 117-125, 1963.
- Swenson, H. A.** See LaRocque, G. A., Jr. 1453
- 1021 **Swindel, G. W., Jr.; Williams, M. R.; Geurin, J. W.; Baldwin, H. L.** Water in Alabama: U.S. Geol. Survey Water-Supply Paper 1765, 89 p., May 1963.

- 0677 **Sylvester, R. O.; Seabloom, R. W.** Quality and significance of irrigation return flow: Am. Soc. Civil Engineers Proc. Paper 3624, Irrig. and Drainage Div. Jour., v. 89, no. IR 3, p. 1-27, Sept. 1963.
- 1362 **Sylvester, R. O.** Effects of water uses and impoundments on water temperature, in Water temperature—Influences, effects, and control: U.S. Public Health Service Pacific NW Water Lab., Pacific NW Symposium on Water Pollution Research, 12th, Corvallis, Oreg., 1963, Proc., p. 6-27, Nov. 1963.
- 1022 **Tanaka, H. H.; Davis, L. V.** Ground-water resources of the Rush Springs sandstone in the Caddo County area, Oklahoma: Oklahoma Geol. Survey Circ. 61, 63 p., 1963.
- 1023 **Tangborn, W. V.** Instrumentation of a high altitude glacier basin to obtain continuous records for water budgets—a preliminary report: Internat. Assoc. Sci. Hydrology Pub. 61, p. 131-137, 1963.
- Tannenbaum, J. A.** See Heath, R. C. 0748
- 1024 **Tanner, W. F.** Spiral flow in rivers, shallow seas, dust devils, and models: Science, v. 139, no. 3549, p. 41-42, Jan. 1963.
- Tarver, G. R.** See Bermes, B. J. 0118
- Tarver, G. R.** See Bermes, B. J. 0119
- 1025 **Taylor, E. F.** States' rights in water law: Am. Water Works Assoc. Jour., v. 55, no. 8, p. 963-970, Aug. 1963.
- 1026 **Taylor, E. F.** Water rights litigation and utility liability: Am. Water Works Assoc. Jour., v. 55, no. 9, p. 1141-1156, Sept. 1963.
- 1027 **Taylor, F. B.** Significance of trace elements in public, finished water supplies: Am. Water Works Assoc. Jour., v. 55, no. 5, p. 619-623, May 1963.
- 1028 **Taylor, G. C., Jr.; Oza, M. M.; Mitra, A.; Sen, B. N.** Ground water in folded Cretaceous sandstone of the Bhachau area, Kutch, India, with reference to the Kandla Port water supply: U.S. Geol. Survey Water-Supply Paper 1608-B, p. B1-B31, Dec. 1963.
- Taylor, Keene.** See Faber, H. A. 0626
- 1293 **Teague, O. E.** Federal legislation in the water resources area: Texas A and M Univ., Water Resources Inst., Water for Texas Conf., 8th ann., College Station, Texas, 1963, Proc., p. 53-54, 1963.
- 1029 **Teasley, J. I.; Cox, W. S.** Determination of pesticides in water by microcoulometric gas chromatography after liquid-liquid extraction: Am. Water Works Assoc. Jour., v. 55, no. 8, p. 1093-1096, Aug. 1963.
- Teel, J. R.** See Hoy, N. D. 0696
- Tek, M. R.** See Nielsen, R. L. 0476
- 0624 **Tennessee Valley Authority.** Nature's constant gift, a report on the water resource of the Tennessee Valley: Knoxville, Tennessee Valley Authority, 76 p., Mar. 1963.
- 0952 **Tennessee Valley Authority.** Parker Branch research watershed project report, 1953-1962: Knoxville, Tennessee Valley Authority, Hydraulic Data Branch, 101 p., 1963.
- 1030 **Tennessee Valley Authority.** A water yield model for analysis of monthly runoff data: Tennessee Valley Authority Office of Tributary Area Devel. Research Paper 2, 78 p., Feb. 1963.

- 1031 **Terrell, J. U.** The United States Department of the Interior—A story of rangeland, wildlife, and dams: New York, Duell, Sloan and Pearce, 117 p., 1963.
- 1032 **Tewinkel, G. C.** Water depths from aerial photographs: Photogramm. Eng., v. 29, no. 6, p. 1037-1042, Nov. 1963.
- 1033 **Texas Water Commission.** Publications of the Texas Water Commission as of August 31, 1963: Texas Water Comm. Circ. 63-06, 37 p., 1963.
- 1390 **Thatcher, L. L.; Hoffman, C. M.** Tritium fallout over North American from the Soviet tests in 1961: Jour. Geophys. Research, v. 68, no. 20, p. 5899-5901, Oct. 15, 1963.
- Theis, C. V.** See Conover, C. S. 0400
- 0975 **Theis, C. V.; Conover, C. S.** Chart for determination of the percentage of pumped water being diverted from a stream or drain, *in* Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C106-C109, 1963.
- 0976 **Theis, C. V.** Drawdowns caused by a well discharging under equilibrium conditions from an aquifer bounded by a finite straight-line source, *in* Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C101-C105, 1963.
- 0977 **Theis, C. V.; Brown, R. H.** Use of a slide rule in solving ground-water problems by the nonequilibrium formula, *in* Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C16-C18, 1963.
- 0978 **Theis, C. V.** Chart for the computation of drawdowns in the vicinity of a discharging well, *in* Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C10-C15, 1963.
- 0980 **Theis, C. V.; Brown, R. H.; Meyer, R. R.** Estimating the transmissibility of aquifers, from the specific capacity of wells, *in* Bentall, Ray, compiler, Methods of determining permeability, transmissibility and drawdown: U.S. Geol. Survey Water-Supply Paper 1536-I, p. 331-341, Dec. 1963.
- 1406 **Theis, C. V.** Spacing of wells, *in* Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C113-C117, 1963.
- 1420 **Theis, C. V.** Hydrologic phenomena affecting the use of tracers in timing ground-water flow, *in* Radioisotopes in hydrology, Proceedings of Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency, Proc. Ser. 71, p. 193-206, 1963. [Available in U.S. from, International Publications, Inc., New York, N. Y.]
- 1489 **Theis, C. V.** Drawdowns resulting from cyclic rates of discharge, *in* Bentall, Ray, compiler, Methods of determining permeability, transmissibility and drawdown: U.S. Geol. Survey Water-Supply Paper 1536-I, p. 319-323, Dec. 1963.
- 0961 **Theobald, P. K., Jr.; Lakin, H. W.; Hawkins, D. B.** The precipitation of aluminum, iron and manganese at the junction of Deer Creek with the Snake River in Summit County, Colorado: Geochim. et Cosmochim. Acta, v. 27, no. 2, p. 121-132, Feb. 1963.
- Thiel, G. A.** See Schwartz, G. M. 0876
- Thiel, T. J.** See Schwab, G. O. 0842
- 0981 **Thomas, C. A.; Broom, H. C.; Cummins, J. E.** Magnitude and frequency of floods in the United States, part 13, Snake River Basin: U.S. Geol. Survey Water-Supply Paper 1668, 250 p., Mar. 1963.

- Thomas, F. H.** *See* Harrison, D. S. 0817
- Thomas, H. A., Jr.** *See* Spofford, W. O., Jr. 1262
- 0620 **Thomas, H. E.** Central Valley; water use at its maximum—case history 6. *in* Hodge, Carle, editor, Aridity and man: Am. Assoc. Adv. Science Pub. 74, p. 529–538, 1963.
- 0962 **Thomas, H. E.** (and others) Effects of drought in basins of interior drainage: U.S. Geol. Survey Prof. Paper 372-E, p. E1–E51, Dec. 1963.
- 0982 **Thomas, H. E.** (and others) Effects of drought along Pacific Coast in California: U.S. Geol. Survey Prof. Paper 372-G, p. G1–G25, Nov. 1963.
- 0983 **Thomas, H. E.** (and others) Effects of drought in the Colorado River basin: U.S. Geol. Survey Prof. Paper 372-F, p. F1–F51, Oct. 1963.
- 0984 **Thomas, H. E.** (and others) Effects of drought in the Rio Grande basin: U.S. Geol. Survey Prof. Paper 372-D, p. D1–D59, Mar. 1963.
- 0985 **Thomas, H. E.** (and others) Effects of drought in central and south Texas: U.S. Geol. Survey Prof. Paper 372-C, p. C1–C31, Oct. 1963.
- 0986 **Thomas, H. E.** General summary of effects of drought in the southwest: U.S. Geol. Survey Prof. Paper 372-H, p. H1–H22, July 1963.
- Thomas, H. E.** *See* Waite, H. A. 1124
- 1389 **Thomas, H. E.** Causes of depletion of the Pecos River in New Mexico: U.S. Geol. Survey Water-Supply Paper 1619-G, p. G1–G14, Feb. 1963.
- 1506 **Thomas, H. E.** A water budget for the artesian aquifer in Ogden Valley, Weber County, Utah, *in* Bentall, Ray, compiler, Methods of collecting and interpreting ground-water data: U.S. Geol. Survey Water-Supply Paper 1544-H, p. H63–H97, Dec. 1963.
- 0988 **Thompson, A. E.** Timber management—yes!: Am. Forests, v. 69, no. 11, p. 8, 70, 72, Nov. 1963.
- 0682 **Thompson, C. B.** Study of municipal and irrigation water shortages: Am. Soc. Civil Engineers Proc. Paper 3714, Irrig. and Drainage Div. Jour., v. 89, no. IR 4, p. 7–13, Dec. 1963.
- Thompson, J. R.** *See* Lusby, G. C. 0508
- 0989 **Thompson, L. A.** Water retention capacity in kaolinite and montmorillonite: South Dakota Acad. Sci. Proc., v. 42, p. 180–183, Nov. 1963.
- Thompson, L. K.** *See* Davis, G. E. 0165
- 1400 **Thomsen, B. W.; Dennis, P. E.** Water salvage possibilities on Sycamore Creek, Maricopa County, Arizona, *in* Arizona Water Resources Comm., Water conservation from mountains to deserts: Arizona Watershed Symposium, 7th. Phoenix, Ariz., 1963, Proc., p. 16–18, 1963.
- 1050 **Thomson, M. T.; Carter, R. F.** Effect of a severe drought (1954) on streamflow in Georgia: Georgia Geol. Survey Bull. 73, 97 p., 1963.
- 1051 **Thorne, J. F.** Hydraulic flow in coupled parallel channels of varying cross sectional area: Am. Soc. Mechanical Engineers Trans., Ser. D, Jour. Basic Eng., v. 85, no. 3, p. 417–423, Sept. 1963.
- 1052 **Thorne, Wynne.** (editor) Land and water use: Am. Assoc. Adv. Science Pub. 73, 364 p., 1963.

- 1053 **Tien, C. L.; Wasan, D. T.** Law of the wall in turbulent channel flow: Physics of Fluids, v. 6, no. 1, p. 144-145, Jan. 1963.
- Tien, Chi.** *See* Yen, Yin-Chao, 1221
- 10971 **Timblin, L. O., Jr.; Peterka, A. S.** Use of radiosotopes for open-channel flow measurements, in Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, p. 37-61, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- Timmons, J. F.** *See* Landgren, N. E. 0290
- 1054 **Tipton, V. B.; Shedd, P. H., Jr.** Calaveras area investigation—Reconnaissance report: California Dept. Water Resources Bull. 97, 228 p., Appendixes A, B., Oct. 1963.
- Tison, L. J.** *See* Nace, R. L. 0455
- 1055 **Titus, F. B.** Geology and ground-water conditions in eastern Valencia County, New Mexico: New Mexico Bur. Mines and Mineral Resources Ground-Water Rept. 7, 113 p., 1963.
- Tixier, M. P.** *See* Doll, H. G. 1297
- Todd, D. K.** *See* Mobasher, Fereidoun, 0411
- Todd, D. K.** *See* Preuss, F. A. 0953
- Todd, D. K.** *See* Sunada, D. K. 1300
- 1336 **Tolley, G. S.** Future economics research on California's water resources, in Hall, W. A., ed., Water Resources Economics conference, Lake Tahoe, California, 1963. Proceedings: California Univ. Water Resources Center Rept. 4, p. 61-95, 1963.
- 1056 **Tomlinson, G. E.** Land and water resources development plan in the Southeast river basins: Jour. Soil and Water Conserv., v. 18, no. 3, p. 109-113, May-June 1963.
- 1368 **Toombs, G. L.; Bailey, J. G.** Summary report for lower Columbia River environmental radiological survey in Oregon, June 5, 1961-July 31, 1963: Portland, Oregon State Board of Health, Div. Sanitation and Eng., 48 p., Oct. 1963.
- 1057 **Toth, J.** A theoretical analysis of groundwater flow in small drainage basins: Jour. Geophys. Research, v. 68, no. 16, p. 4795-4812, Aug. 15, 1963.
- 1333 **Toth, J.** A theorotical analysis of groundwater flow in small drainage basins, in Canada National Research Council, Groundwater, Proceedings of Hydrology Symposium No. 3, Calgary, Alberta, 1962: Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 75-106, 1963.
- 1265 **Towne, W. W.; Agee, J. H.; Davidson, J. H.** Planning for water quality control in the Pacific Northwest, in Industrial Waste Conference, 17th, Lafayette, Indiana, 1962, Proc.: Purdue Univ. Eng. Ext. Dept. Ser. 112, (Purdue Univ. Eng. Bull., v. 47, no. 2, Mar. 1963), p. 48-52, 1963.
- 1329 **Travis, W. I.** Hydrogeology and its application to engineering problems, in Engineering geology symposium, 1st. ann., Pocatello, Idaho, 1963, Proc.: Pocatello, Idaho State Univ., p. 17-20, 1963.
- 0925 **Trelelease, F. J.; Bittinger, M. W.** Mechanics of a mathematical ground-water model: Am. Soc. Civil Engineers Proc. Paper 3461, Irrig. and Drainage Div. Jour., v. 89, no. IR 1, p. 51-62, Mar. 1963.

- Trimble, G. R., Jr.** See Reinhart, K. G. 0930
- 1058 **Trimble, G. R., Jr.; Reinhart, K. G.; Webster, H. H.** Cutting the forest to increase water yields: Jour. Forestry, v. 61, no. 9, p. 635-640, Sept. 1963.
- 1059 **Tsai, J. Cha-Hong; Burchinal, J. C.** An annotated bibliography of water resource papers pertaining to the State of West Virginia: Morgantown, West Virginia Univ. Center for Appalachian Studies and Devel., 132 p., Oct. 1963.
- 1060 **Tschinkel, H. M.** Short-term fluctuation in streamflow as related to evaporation and transpiration: Jour. Geophys. Research, v. 68, no. 24, p. 6459-6469, Dec. 15, 1963.
- 1047 **Tsivoglou, E. C.; Burke, C. W., Jr.** Radioactivity standards for water: Am. Water Works Assoc. Jour., v. 55, no. 6, p. 668-676, June 1963.
- 1061 **Tsivoglou, E. C.** Research for the control of radioactive pollutants: Water Pollution Control Federation Jour., v. 35, no. 2, p. 242-259, Feb. 1963.
- Tsubota, H.** See Miyake, Y. 0964
- 1062 **Turcan, A. N., Jr.** Estimating the specific capacity of a well: Art. 222 in U.S. Geol. Survey Prof. Paper 450-E, p. E145-E148, Mar. 1963.
- Turner, G. T.** See Lusby, G. C. 0508
- Tuttle, C. R.** See Allen, W. B. 0060
- 1063 **Twenter, F. R.; Metzger, D. G.** Geology and ground water in Verde Valley—The Mogollon Rim region, Arizona: U.S. Geol. Survey Bull. 1177, 132 p., Dec. 1963.
- 1064 **Twort, A. C.** A textbook of water supply: New York, American Elsevier Pub. Co., Inc., 422 p., 1963.
- 1065 **U.N. Econ. Comm. Asia Far East.** Proceedings of the seminar on geochemical prospecting methods and techniques: U.N. ECAFE Mineral Resources Devel. Ser. 21, 202 p., 1963. [U.N. Pub. no. 64, II. F.7, available from International Publications, Inc., N. Y., N. Y.]
- 1236 **U.N. Econ. Comm. Asia Far East.** Regional Conference on Water Resources Development in Asia and the Far East, 5th, Bangkok, Thailand, Nov. 20-26, 1962. Proceedings: UNECAFE, Bur. Flood Control and Water Resources Devel., Water Resources Ser. 23, 208 p., 1963.
- 1066 **U.N. Educ. Sci. Cultural Org.** Long-term research programme in the field of scientific hydrology: Arid Zone, no. 21, p. 3-8, September 1963.
- 1345 **U.N. Educ. Sci. Cultural Org.** Changes of climate—Proceedings of the Rome Symposium organized by UNESCO and the World Meteorological Organization: UNESCO Arid Zone Research Ser., v. 20, 488 p., 1963.
- 1068 **U.N., Office Secretary-General.** Science and technology for development. Volume II. Natural resources: New York, United Nations Pub. E/CONF. 39/1, Vol. II, 243 p., 1963. [Available from International Publications, Inc., N.Y., N.Y.]
- 1276 **University of Michigan.** (Institute for Science and Technology, Great Lakes Research Division) Great Lakes Research Conference, 6th, Ann Arbor, Michigan June 13-15, 1963, Proceedings: Michigan Univ. Great Lakes Research Div. Pub. 10, 295 p., 1963.

- 1103 **Upper Colorado River Commission.** Fifteenth Annual Report: Salt Lake City, Upper Colorado River Commission, 106 p., Sept. 1963.
- 1391 **U.S. Army.** (Chief Engineers Office) Seminar on river basin planning, Ft. Belvoir, Virginia, May 27-31, 1963: Washington, D. C., U.S. Army, Office of the Chief of Engineers, 483 p., 1963.
- 1070 **U.S. Army Corps of Engineers.** Potomac River Basin report: U.S. Army Corps of Engineers Dist., Baltimore, Basin Studies Branch, 9 v., Feb. 1963.
- 1071 **U.S. Army Corps of Engineers.** Unit hydrographs. Part 1, Principles and determinations: U.S. Army Corps of Engineers Dist., Baltimore, Civil Works Inv. Project 152, 30 p., 1963.
- 1072 **U.S. Army Corps of Engineers.** Wood River Drainage and Levee District, Madison County, Illinois [River Survey]: U.S. 88th Cong., 1st sess., House Doc. 150, 110 p., 1963.
- 1073 **U.S. Army Corps of Engineers.** Waurika Reservoir, Beaver Creek, Oklahoma [River Survey]: U.S. 88th Cong., 1st sess., Senate Doc. 33, 175 p., 1963.
- 1074 **U.S. Army Corps of Engineers.** Holt Lock and Dam, Black Warrior River, Alabama [River Survey]: U.S. 88th Cong., 1st Sess., House Doc. 84, 43 p., 1963.
- 1075 **U.S. Army Corps of Engineers.** Report of sedimentation resurvey, Garza-Little Elm Reservoir, Elm Fork of Trinity River, Texas, 1960. Trinity River Basin: Fort Worth, U.S. Army Corps of Engineers, 22 p., Apr. 1963.
- 1367 **U.S. Army Corps of Engineers.** Technical report on barriers; a part of the comprehensive survey of San Francisco Bay and Tributaries, California: U.S. Army, Corps of Engineers, 293 p., 1963.
- 1403 **U.S. Army Corps of Engineers; U.S. Dept. of the Interior.** Joint report on water and related land resources development for the Missouri River, Ft. Peck Reservoir to Ft. Benton, Montana: U.S. Army Corps of Engineers, Missouri River Div., 4 v., June 1963.
- 1069 **U.S. Army, CRREL.** Bibliography on snow, ice and permafrost, with abstracts: U.S. Army Cold Regions Research and Eng. Lab., CRREL Rept. 12, v. 17, 269 p., June 1963.
- 1076 **U.S. Atomic Energy Commission.** Radiostrontium in tap water, March-June 1962: Radiolog. Health Data, v. 4, no. 1, p. 40, Jan. 1963.
- 1077 **U.S. Atomic Energy Commission.** Radiostrontium in tap water July-December 1962: Radiolog. Health Data, v. 4, no. 7, p. 372, July 1963.
- 1078 **U.S. Bureau of Reclamation.** Research—Engineering methods and materials: U.S. Bur. Reclamation Water Resources Tech. Pub. Research Rept. 1, 137 p., 1963.
- 1079 **U.S. Bureau of Reclamation.** Reevaluation statement, Chief Joseph Dam Project, Washington, Chelan Division: U.S. 88th Cong., 2d sess., House Doc. 232, 110 p., 1963. [1964]
- 1080 **U.S. Bureau of Reclamation.** Reevaluation statement, Kennewick Division extension, Yakima Project, Washington: U.S. 88th Cong., 2d sess., House Doc. 296, 103 p., 1963. [1964]
- 1081 **U.S. Bureau of Reclamation.** Reevaluation statement, Teton Basin Project, Idaho, Lower Teton Division: U.S. 88th Cong., 2d sess., House Doc. 208, 100 p., 1963. [1964]

- 1082 **U.S. Bureau of Reclamation.** Earth manual, 1st ed., revised 1963: Denver, U.S. Bur. Reclamation, 783 p., 1963.
- 1349 **U.S. Bureau of Reclamation.** Prineville Dam; Crooked River Project, Oregon: Denver, U.S. Bur. Reclamation Tech. Record Design and Construction, 149 p., Apr. 1963.
- 1350 **U.S. Bureau of Reclamation.** Fruitland Mesa project, Colorado. Letter from Assistant Secretary of the Interior transmitting the report on the Fruitland Mesa project, Colorado, pursuant to 53 Stat. 1187: U.S. 88th Cong., 1st sess., House Doc. 107, 149 p., 1963.
- 1049 **U.S. Congress, House.** Watershed development projects, 1963. Hearings before Subcommittee on Watershed Development of the Committee on Public Works, House of Representatives, Eighty-eighth Congress, first session: U.S. 88th Cong., 1st sess., House Comm. on Public Works Hearings, 101 p., 1963.
- 1083 **U.S. Congress, Senate.** Phreatophyte control in the Pecos River basin—Hearing before the Subcommittee on Irrigation and Reclamation: U.S. 88th Cong., 1st sess., Senate Committee on Interior and Insular Affairs Hearings, 48 p., May 1963.
- 1084 **U.S. Congress, Senate.** River basin planning act of 1964, hearings before Subcommittee on Irrigation and Reclamation, 88th Cong., 1st sess., on S 1111, Sept. 12-13, 1963: Washington, D. C., U.S. Govt. Printing Office Pub. No. 19061, 173 p., 1963.
- 1085 **U.S. Congress, Senate.** Great Lakes-Hudson River waterway, New York, and water supply storage, hearing before Senate Subcommittee, 88th Cong., 1st sess., on S 1938 and HR 1696, Aug. 29, 1963: Washington, D. C., U.S. Govt. Printing Office Pub. No. 19068, 34 p., 1963.
- 1086 **U.S. Congress, Senate.** Geothermal steam leasing, hearing before Subcommittee on Minerals, Materials and Fuels, 88th Cong., 1st sess., on S 883, pt. 1, July 12, 1963: Washington, D. C., U.S. Govt. Printing Office, Pub. No. 19059, 87 p., 1963.
- 1402 **U.S. Congress, Senate.** (Committee on Public Works, Special Subcommittee on Air and Water Pollution) Water pollution control, Hearings: Washington, D. C., U.S. 88th Cong., Senate, 1st sess., 716 p., June 1963.
- U.S. Dept. of the Interior.** *See* U.S. Army Corps of Engineers. 1403
- 1048 **U.S. Geological Survey.** Compilation of records of surface waters of the United States, October 1950 to September 1960, part 13, Snake River Basin: U.S. Geol. Survey Water-Supply Paper 1737, 282 p., Feb. 1963.
- 1088 **U.S. Geological Survey.** Summary of floods in the United States during 1958: U.S. Geol. Survey Water-Supply Paper 1660-B, p. B1-B97, Dec. 1963.
- 1089 **U.S. Geological Survey.** Ground-water levels in the United States, 1956-60. Northwestern States: U.S. Geol. Survey Water-Supply Paper 1760, 222 p., Sept. 1963.
- 1090 **U.S. Geological Survey.** Ground-water levels in the United States, 1956-60. Southwestern States: U.S. Geol. Survey Water-Supply Paper 1770, 160 p., Sept. 1963.
- 1091 **U.S. Geological Survey.** Quality of surface waters for irrigation, Western States, 1959: U.S. Geol. Survey Water-Supply Paper 1699, 147 p., 1963.

- 1092 **U.S. Geological Survey.** Compilation of records of surface waters of the United States, October 1950 to September 1960, part 10, The Great Basin: U.S. Geol. Survey Water-Supply Paper 1734, 318 p., Jan. 1963.
- 1093 **U.S. Geological Survey.** Drainage areas of Texas streams, San Antonio River basin: Texas Water Comm. Circ. 63-07, 11 p., Oct. 1963.
- 1094 **U.S. Geological Survey.** Drainage areas of Texas streams—Trinity River basin and Trinity-San Jacinto coastal area: Texas Water Comm. Circ. 63-01, 21 p., Feb. 1963.
- 1392 **U.S. Geological Survey.** Compilation of records of surface waters of the United States, October 1950 to September 1960, part 14, Pacific slope basins in Oregon and lower Columbia River basin: U.S. Geol. Survey Water-Supply Paper 1738, 372 p., Jan. 1963.
- 1490 **U.S. Geological Survey.** Summary of floods in the United States during 1957: U.S. Geol. Survey Water-Supply Paper 1652-C, p. C1-C98, Dec. 1963.
- 1422 **U.S. Inter-Agency Comm. (on Water Res.)** Determination of fluvial sediment discharge—Methods used in measurement and analysis of sediment loads in streams: U.S. Inter-Agency Comm. on Water Resources, Subcommittee on Sedimentation, St. Anthony Falls Hydraulic Lab. Rept. 14, 151 p., 1963.
- 1423 **U.S. Inter-Agency Comm. (on Water Res.)** A summary of the work of the Inter-Agency Sedimentation Project, Report S of Measurement and analysis of sediment loads in streams: U.S. Inter-Agency Comm. on Water Resources, Subcommittee on Sedimentation, St. Anthony Falls Hydraulic Lab. Rept. S, 29 p., Jan.-Feb. 1963.
- 1095 **U.S. Public Health Service.** Radioactivity in drinking water, 1961, Drinking Water Analysis Program: Radiolog. Health Data, v. 4, no. 1, p. 37-40, Jan. 1963.
- 1096 **U.S. Public Health Service.** Radioactivity in raw surface waters [monthly data July 1962-June 1963]: Radiolog. Health Data, v. 4, nos. 1-12, Jan.-Dec. 1963.
- 1100 **U.S. Public Health Service.** Annotated bibliography on the effects of irrigation practices on stream water quality, with emphasis on salinity and pesticides: U.S. Public Health Service Dupl. Rept. PR-12, 37 p., Nov. 1963.
- 1102 **U.S. Study Commission. (Southeast River Basins)** Plan for development of the land and water resources of the Southeast River Basins: U.S. Study Comm., Southeast River Basins Rept., 12 v., 1963.
- Utah State University.** *See* Utah Water and Power Board. 1104
- 1104 **Utah Water and Power Board; Utah State University.** Developing a state water plan—Utah's water resources—Problems and needs, a challenge: Salt Lake City, Utah Water and Power Board, Developing a State Water Plan [series], 122 p., Mar. 1963.
- vanBavel, C. H. M.** *See* Fritschen, L. J. 0763
- vanBavel, C. H. M.** *See* Fritschen, L. J. 0764
- 1105 **vanBavel, C. H. M.** Measurement of soil moisture content, in United States National report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 577-579, June 1963.
- 1106 **vanBavel, C. H. M.; Fritschen, L. J.; Reginato, R. J.** Surface energy balance in arid lands agriculture, 1960-61: U.S. Dept. Agriculture Production Research Rept. 76, 46 p., Dec. 1963.
- 1147 **vanBavel, C. H. M.; Nixon, P. R.; Hauser, V. L.** Soil moisture measurement with the neutron methods: U.S. Agr. Research Service, ARS 41-70, 39 p., June 1963.

- 1289 **Vandertulip, J. J.** Problems associated with surface water supply and development: Texas A and M Univ., Water Resources Inst., Water for Texas Conf., 8th ann., College Station, Texas, 1963, Proc., p. 30-33, 1963.
- 1098 **vanEverdingen, R. O.** Groundwater flow-diagrams in sections with exaggerated vertical scale: Canada Geol. Survey Paper 63-27, 21 p., 1963.
- 1108 **vanEverdingen, R. O.; Bhattacharyya, B. K.** Data for groundwater model studies: Canada Geol. Survey Paper 63-12, 31 p., 1963.
- 1107 **VanHall, C. E.; Safranko, John; Stenger, V. A.** Rapid combustion method for the determination of organic substances in aqueous solutions: Anal. Chemistry, v. 35, no. 3, p. 315-319, Mar. 1963.
- 1109 **VanHylckama, T. E. A.** Growth, development and water use by saltcedar (*Tamarix pentandra*) under different conditions of weather and access to water: Internat. Assoc. Sci. Hydrology, Pub. 62, p. 75-86, 1963.
- 1110 **Vanlier, K. E.** Reconnaissance of the ground-water resources of Alger County, Michigan: Michigan Geol. Survey Water Inv. 1, 55 p., 1963.
- 1111 **Vanlier, K. E.** Ground-water in Menominee County [Michigan]: Michigan Geol. Survey Water Inv. 2, 42 p., 1963.
- 1112 **Vanlier, K. E.** Ground-water resources of the Alma area, Michigan: U.S. Geol. Survey Water-Supply Paper 1619-E, p. E1-E66, Oct. 1963.
- Vanlier, K. E.** See Wiitala, S. W. 1190
- 0675 **vanSchilgaarde, Jan.** Design of tile drainage for falling water tables: Am. Soc. Civil Engineers Proc. Paper 3543, Irrig. and Drainage Div. Jour., v. 89, no. IR 2, p.1-11, June 1963.
- 1113 **VanWazer, J. R.; Lyons, J. W.; Kim, K. Y.; Colwell, R. E.** Viscosity and flow measurement—A laboratory handbook of rheology: New York, Interscience Publishers, 406 p., 1963.
- Varadarajulu, G. H.** See Anandakrishnan, M. 0053
- 1114 **Vasa, Jiri.** Some results from the investigation of methods and instruments for the determination of evapotranspiration: Internat. Assoc. Sci. Hydrology Pub. 62, p. 237-243, 1963.
- 1115 **Vaseen, V. A.** Is your "water bank account" top heavy with capital?: Ground Water, v. 1, no. 4, p. 33-35, Oct. 1963.
- Vecchioli, John.** See Gill, H. E. 0777
- 1116 **Verryard, R. G.** A review of studies on climatic fluctuations during the period of the meteorological record, in Changes of climate: UNESCO Arid Zone Research Ser., v. 20, p. 3-15, 1963.
- 1117 **Vickers, W. W.** Geochemical dating techniques applied to Antarctic snow samples: Internat. Assoc. Sci. Hydrology Pub. 61, p. 199-215, 1963.
- Viessman, Warren, Jr.** See Knapp, J. W. 0381
- 1118 **Visser, W. C.** Soil moisture content and evapotranspiration: Internat. Assoc. Sci. Hydrology Pub. 62, p. 288-294, 1963.
- 1119 **Voegeli, P. T., Sr.** Ground water in Colorado—Its importance during an emergency: Colorado Water Conserv. Board Ground-Water Circ. 9, 10 p., 1963.

**Voelker, R. A.** *See* Heukelekian, H. 0941

0959 **Vogel, J. C.; Ehhalt, D.** The use of the carbon isotopes in ground-water studies, in Radioisotopes in hydrology, Proceedings of Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963; Internat. Atomic Energy Agency Proc. Ser. 71, p. 383-395, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]

0974 **Vogel, J. C.; Ehhalt, D.; Roether, W.** A Survey of the natural isotopes of water in South Africa, in Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology, Tokyo, 1963; Internat. Atomic Energy Agency Proc. Ser. 71, p. 407-415, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]

**Vogel, O. W.** *See* Harmeson, R. H. 0814

1120 **Volborth, Alexis; Banta, H. E.** Oxygen determination in rocks, minerals, and water by neutron activation: Anal. Chemistry, v. 35, no. 13, p. 2203-2205, Dec. 1963.

1442 **vonSchaik, J. C.; Milne, R. A.** Salt accumulation in a glacial till soil in the presence of saline ground water at shallow depths: Canadian Jour. Soil Sci., v. 43, no. 1, p. 135-140, Feb. 1963.

**Voyles, C. F.** *See* Navone, Remo. 0460

**Wait, R. L.** *See* Callahan, J. T. 0031

1122 **Wait, R. L.** Geology and ground-water resources of Dougherty County, Georgia: U.S. Geol. Survey Water-Supply Paper 1539-P, p. P1-P102, May 1963.

1123 **Wait, R. L.; McCollum, M. J.** Contamination of fresh-water aquifers through an unplugged oil-test well in Glynn County, Georgia: Georgia Mineral Newsletter, v. 16, no. 3-4, p. 74-80, Fall-Winter 1963.

1124 **Waite, H. A.; Thomas, H. E.** Cedar City Valley, Utah, in Thomas, H. E., and others, Effects of drought in basins of interior drainage: U.S. Geol. Survey Prof. Paper 372-E, p. E23-E29, Dec. 1963.

1125 **Walker, A. C.** The value of State ground-water agencies to the small water well contractor: Ground Water, v. 1, no. 1, p. 4-7, Jan. 1963.

**Walker, C. J.** *See* Miller, J. S. 0644

1126 **Walker, E. H.** Relative rates of erosion under grass and forest in a valley of western Wyoming: Northwest Sci., v. 37, no. 3, p. 104-111, Aug. 1963.

1127 **Walker, G. E.; Eakin, T. E.** Geology and ground water of Amargosa Desert, Nevada-California: Nevada Dept. Conserv. and Nat. Resources, Ground-Water Resources—Reconn. Ser. Rept. 14, 45 p., 1963.

1128 **Waller, R. M.** Data on wells in the Homer area, Alaska: Alaska Dept. Health and Welfare Hydrol. Data 23, 24 p., 1963.

1129 **Wallis, J. R.** Logging for water quality in Northern California: U.S. Forest Service Research Note PSW-N23, 7 p., 1963.

1097 **Wallo, E. M.; Remson, Irwin.** Applications of tracers in studies of soil water movement, in United States National report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 576-577, June 1963.

**Walser, J. T.** *See* Elliott, R. D. 1404

**Walsh, D. T.** *See* Smith, E. J. 0856

- 1130 **Walter, J.** The use of monomolecular films to reduce evaporation: Internat. Assoc. Sci. Hydrology Pub. 62, p. 39-48, 1963.
- Walters, K. L. *See* Liesch, B. A., 0493
- 1099 **Walters, K. L.** Highly productive aquifers in the Tacoma area, Washington: Art. 227 in U.S. Geol. Survey Prof. Paper 450-E, p. E157-E158, Mar. 1963.
- 1131 **Walters, K. L.** Geologic reconnaissance and test-well drilling, Cordova, Alaska: U.S. Geol. Survey Water-Supply Paper 1779-A, p. A1-A11, Dec. 1963.
- 1133 **Walton, A. G.** The effect of sedimentation upon precipitation kinetics: Anal. Chemistry, v. 35, no. 7, p. 917-918, June 1963.
- Walton, Alan. *See* Feely, H. W., 0634
- 1132 **Walton, Alan.** The distribution in soils of radioactivity from weapons tests: Jour. Geophys. Research, v. 68, no. 5, p. 1485-1496, Mar. 1, 1963.
- 1134 **Walton, Graham.** Protection of ground-water resources: Ground Water, v. 1, no. 2, p. 22-24, 33, Apr. 1963.
- Walton, W. C. *See* Csallany, Sandor, 0154
- 1135 **Walton, W. C.** Microtime measurements of ground-water level fluctuations: Ground Water, v. 1, no. 2, p. 18-19, Apr. 1963.
- i136 **Walton, W. C.; Neill, J. C.** Statistical analysis of specific-capacity data for a dolomite aquifer: Jour. Geophys. Research, v. 68, no. 8, p. 2251-2262, Apr. 15, 1963.
- i137 **Walton, W. C.; Prickett, T. A.** Hydrogeologic electric analog computers: Am. Soc. Civil Engineers Proc. Paper 3695, Hydraulics Div. Jour., v. 89, no. HY6, p. 67-91, Nov. 1963.
- i149 **Walton, W. C.; Drescher, W. J.** Composite type curve for analyzing aquifer-test data, in Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C1-C3, 1963.
- i150 **Ward, J. C.** Stream flow quantity and quality correlations and statistical analyses: Arkansas Univ. Eng. Expt. Sta. Research Rept. 3, 132 p., June 1963.
- 0688 **Ward, R. C.** Observations of potential evapotranspiration (PE) on the Thames floodplain 1959-1960: Jour. Hydrology [Amsterdam], v. 1, no. 3, p. 183-194, 1963.
- i151 **Ward, W. H.** A glacier wheel for measuring slip at the bed of a glacier: Internat. Assoc. Sci. Hydrology Pub. 61, p. 219-223, 1963.
- Waring, G. A. *See* White, D. E., 1401
- 1152 **Wark, J. W.; Keller, F. J.; Feltz, H. R.** Potomac River Basin Report, Appendix H—Reconnaissance of sedimentation and chemical quality of surface water in the Potomac River Basin: U.S. Army Engineers Dist., Baltimore, Basin Studies Branch, v. 7, 75 p., 1963. [Originally released in 1961].
- 1153 **Wark, J. W.; Keller, F. J.** Preliminary study of sediment sources and transport in the Potomac River basin: Interstate Comm. Potomac River Basin Tech. Bull. 1963-II, 28 p., June 1963.
- Warnick, C. C. *See* Duncan, D. L., 1244
- 1154 **Warren, J. E.; Root, P. J.** The behavior of naturally fractured reservoirs: Soc. Petroleum Engineers Jour., v. 3, no. 3, p. 245-255, Sept. 1963.

- 1496 **Warren, M. A.** Graphic shortcuts in applying the nonequilibrium formula to ground-water problems, in Bentall, Ray, compiler, Shortcuts and special problems in aquifer tests: U.S. Geol. Survey Water-Supply Paper 1545-C, p. C19-C28, 1963.
- Wasan, D. T.** See Tien, C. L. 1053
- Washburn, R. L.** See Foxworthy, B. L. 0758
- 1143 **Wasson, B. E.** Water resources of Attala County, Mississippi, in Attala County mineral resources, by Parks, W. S., Moore, W. H., and McCutheon, T. C.: Mississippi Geol., Econ., and Topog. Survey Bull. 99, p. 139-191, 1963.
- 1155 **Wasson, B. E.; Harvey, E. J.** Memorandum on the water supply at Kosciusko, Mississippi: Mississippi Board Water Commissioners Bull. 63-2, 11 p., Feb. 1963.
- 1156 **Wastler, T. A.** Application of spectral analysis to stream and estuary field surveys, pt. I—Individual power spectra: U.S. Public Health Service Pub. 999-WP-7, 31 p., Nov. 1963.
- 1157 **Watkins, F. A., Jr.; Rosenschein, J. S.** Ground-water geology and hydrology of Bunker Hill Air Force base and vicinity, Peru, Indiana: U.S. Geol. Survey Water-Supply Paper 1619-B, p. B1-B32, Sept. 1963.
- 1159 **Watkins, F. A., Jr.; Jordan, D. G.** Ground-water resources of west-central Indiana, preliminary report—Owen County: Indiana Div. Water Resources Bull. 18, 99 p., 1963.
- 1495 **Watkins, F. A., Jr.; Jordan, D. G.** Ground-water resources of west-central Indiana, preliminary report—Vigo County: Indiana Div. Water Resources Bull. 17, 358 p., 1963.
- 1334 **Watt, A. K.** An assessment of the non-equilibrium equations in various aquifers, in Canada National Research Council, Groundwater, Proceedings of Hydrology Symposium No. 3, Calgary, Alberta, 1962: Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 139-178, 1963.
- Wayman, C. H.** See Page, H. G. 0584
- 1160 **Wayman, C. H.** Determination of total sulfur in water by neutron activation analysis: Anal. Chemistry, v. 35, no. 6, p. 768-769, May 1963.
- 1161 **Wayman, C. H.; Robertson, J. B.; Page, H. G.** Adsorption of the surfactant ABS<sup>35</sup> on montmorillonite: Art. 59 in U.S. Geol. Survey Prof. Paper 475-B, p. B213-B216, June 1963.
- 1162 **Wayman, C. H.; Page, H. G.; Robertson, J. B.** Effect of detergents on the viscosity of water containing bacteria and clay in suspension: Art. 58 in U.S. Geol. Survey Prof. Paper 475-B, p. B209-B212, June 1963.
- 1163 **Wayman, C. H.; Robertson, J. B.; Page, H. G.** Factors influencing the survival of Escherichia coli in detergent solutions: Art. 57 in U.S. Geol. Survey Prof. Paper 475-B, p. B205-B208, June 1963.
- 1164 **Wayman, C. H.; Page, H. G.; Robertson, J. B.** Adsorption of the surfactant ABS<sup>35</sup> on illite: Art. 119 in U.S. Geol. Survey Prof. Paper 475-C, p. C221-C223, Nov. 1963.
- 1165 **Wayman, C. H.; Robertson, J. B.** Biodegradation of surfactants in synthetic detergents under aerobic and anaerobic conditions at 10°C: Art. 120 in U.S. Geol. Survey Prof. Paper 475-C, p. C224-C227, Nov. 1963.
- 1166 **Wayman, C. H.; Robertson, J. B.; Page, H. G.** Adsorption of the surfactant ABS<sup>35</sup> on kaolinite: Art. 238 in U.S. Geol. Survey Prof. Paper 450-E, p. E181-E183, Mar. 1963.

- 1167 **Wayman, C. H.** An application of the Gibbs adsorption equation to detergent solutions: Art. 184 in U.S. Geol. Survey Prof. Paper 450-E, p. E184-E186, Mar. 1963.
- 1168 **Wayman, C. H.** The malachite-azurite equilibrium in soil profiles: Soil Sci., v. 95, no. 2, p. 134-136, Feb. 1963.
- 1169 **Wayman, C. H.; Robertson, J. B.** Biodegradation of anionic and nonionic surfactants under aerobic and anaerobic conditions: Biotechnology and Bioengineering, v. 5, p. 367-384, Dec. 1963.
- 1302 **Wayman, C. H.** Surfactant sorption on heteronionic clay minerals, in International Clay Conference, Stockholm, Sweden, Aug. 1963, Proc., v. I: New York, Macmillan Co., p. 329-342, 1963.
- 1170 **Weaver, H. A.; Stephens, J. C.** Relation of evaporation to potential evapotranspiration: Am. Soc. Agr. Engineers Trans. (Gen. Ed.), v. 6, no. 1, p. 55-56, June 1963.
- 1171 **Weaver, Leo; Hoadley, A. W.; Baker, Stanley.** Radioactivity in surface waters of the United States 1957-1962: Radiolog. Health Data, v. 4, no. 5, p. 306-316, June 1963.
- 1172 **Weber, J. N.; LaRocque, A.** Isotope ratios in marine mollusk shells after prolonged contact with flowing fresh water: Science, v. 142, no. 3600, p. 1666, Dec. 1963.
- 1173 **Weber, W. J., Jr.; Stumm, Warner.** Mechanism of hydrogen ion buffering in natural waters: Am. Water Works Assoc. Jour., v. 55, no. 12, p. 1553-1578, Dec. 1963.
- Webster, H. H.** See Trimble, G. R., Jr. 1058
- 1142 **Webster, H. H.; Hagenstein, P. R.** Economic analysis of watershed management decisions—What sort of guides for land managers?: Jour. Forestry, v. 61, no. 9, p. 631-634, Sept. 1963.
- 1175 **Weeks, E. P.; Hanson, G. F.; Holt, C. L. R., Jr.** Movie on Little Plover River project—A study in sand-plains hydrology: U.S. Geol. Survey Open-file movie, 16mm., 35 min., color, sound, Oct. 1963.
- 1174 **Weertman, J.** Profile and heat balance at the bottom surface of an ice sheet fringed by mountain ranges: Internat. Assoc. Sci. Hydrology Pub. 61, p. 245-252, 1963.
- 1176 **Weidick, A.** Glacial variations in West Greenland in postglacial time: Internat. Assoc. Sci. Hydrology Bull. v. 8, no. 1, p. 75-82, Apr. 1963.
- 1177 **Weigle, J. M.** Ground-water favorability map of the Nashua-Merrimack area, New Hampshire: New Hampshire Water Resources Board, one sheet, 1963.
- 1178 **Weiss, C. M.; Oglesby, R. T.** Instrumentation for monitoring water quality in reservoirs: Am. Water Works Assoc. Jour., v. 55, no. 9, p. 1213-1219, Sept. 1963.
- 1393 **Weiss, C. M.; Johnson, J. D.; Kwon, Byung.** Direct determination of organic constituents of natural waters by flame ionization gas chromatography: Am. Water Works Assoc. Jour., v. 55, no. 10, p. 1367-1379, Oct. 1963.
- 1179 **Weiss, L. L.** Securing more nearly true precipitation measurements: Am. Soc. Civil Engineers Proc. Paper 3446, Hydraulics Div. Jour., v. 89, no. HY2, p. 11-18, Mar. 1963.
- Weist, W. G., Jr.** See Johnson, P. M. 0342

- 1180 **Weist, W. G., Jr.** Water in the Dakota and Purgatoire Formations in Otero County and the southern part of Crowley County, Colorado: U.S. Geol. Survey Water-Supply Paper 1669-P, p. P1-P17, Sept. 1963.
- 1181 **Weld, B. A.; Asselstine, E. S.; Johnson, Arthur.** Reports and maps of the Geological Survey released only in the open files, 1962: U.S. Geol. Survey Circ. 473, 15 p., July 1963.
- Wells, C. C., Jr.** See Okun, D. A. 1268
- Wells, L. C.** See Cronin, J. G. 1488
- Wendel, M. M.** See Whitaker, S. 1141
- Wendorf, F.** See Leopold, L. B. 1307
- West, L. R.** See Harris, H. B. 0815
- 1182 **West, S. W.; Kilburn, Chabot.** Ground water for irrigation in part of the Fort Hall Indian Reservation, Idaho: U.S. Geol. Survey Water-Supply Paper 1576-D, p. D1-D33, Dec. 1963.
- 1183 **West, S. W.** Water levels, New Mexico, January to April 1963: Ground Water, v. 1, no. 3, p. 26, July, 1963.
- 1184 **West Virginia Div. Water Resources.** West Virginia water quality network; compilation of data: Charleston, West Virginia Div. Water Resources, 50 p., 1963.
- 1141 **Western Snow Conference.** Proceedings of the 31st annual meeting, Yosemite National Park, California, Apr. 17-19, 1963: Tacoma, Wash., Western Snow Conf., 135 p., Apr. 1963. [Gen. Chm., Wilbur D. Simons, P. O. Box 1352, Tacoma 1, Wash.]
- 1394 **Wheeler, G. E., Jr.** Rx for urban watershed ills: Jour. Soil and Water Conserv., v. 18, no. 4, p. 164-165, July-Aug. 1963.
- 1141 **Whitaker, S.; Wendel, M. M.** Numerical solution of the equations of motion for flow around objects in channels at low Reynolds numbers: Appl. Sci. Research, Sec. A, v. 12, no. 1, p. 91-104, 1963.
- 1146 **White, D. E.; Anderson, E. T.; Grubbs, D. K.** Geothermal brine well-mile-deep drill hole may tap ore-bearing magmatic water and rocks undergoing metamorphism: Science, v. 139, no. 3558, p. 919-922, Jan. 1963.
- 1185 **White, D. E.** Fumaroles, hot springs, and hydrothermal alteration, in United States National Report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 508-511, June 1963.
- 1401 **White, D. E.; Hem, J. D.; Waring, G. A.** Chemical composition of sub-surface waters, Chapter F of Data of Geochemistry, 6th ed., Michael Fleischer, Technical Editor: U.S. Geol. Survey Prof. Paper 440-F, p. F1-F67, Jan. 1963.
- 1145 **White, G. F.** The Mekong River Plan: Sci. Am., v. 208, no. 4, p. 49-59, Apr. 1963.
- 1186 **White, N. D.; Stulik, R. S.; Morse, E. K. (and others)** Annual report on ground water in Arizona, Spring 1962 to Spring 1963: Arizona State Land Dept. Water Resources Rept. 15, 136 p., Sept. 1963.
- 1187 **White, N. D.** Analysis and evaluation of available hydrologic data for San Simon Basin, Cochise and Graham Counties, Arizona: U.S. Geol. Survey Water-Supply Paper 1619-DD, p. DD1-DD33, May 1963.
- 1395 **White, N. D.** Ground water conditions in the Rainbow Valley and Waterman Wash areas, Maricopa and Pinal Counties, Arizona: U.S. Geol. Survey Water-Supply Paper 1669-F, p. F1-F50, Jan. 1963.

- 1188 **Whitford, L. A.; Schumacher, G. J.** Communities of algae in North Carolina streams and their seasonal relations: *Hydrobiologia*, v. 22, no. 1-2, p. 133-196, 1963.
- 1443 **Whitman, H. M.; Kilburn, Chabot.** Ground-water conditions in southwestern Louisiana, 1961 and 1962, with a discussion of the Chicot aquifer in the coastal area: Louisiana Dept. Conserv., Geol. Survey, and Louisiana Dept. Public Works, Water Resources Pamph. 12, 32 p., Sept. 1963.
- 1189 **Whittington, R. B.** A simple dimensional method for hydraulic problems: Am. Soc. Civil Engineers Proc. Paper 3629, Hydraulics Div. Jour., v. 89, no. HY5, p. 1-27, Sept. 1963.
- 1140 **Widmer, Kemble.** Geology of the ground water resources of Mercer County: New Jersey Bur. Geology and Topography, Geol. Rept. Ser. 7, 1963.
- 1190 **Wiitala, S. W.; Vanlier, K. E.; Krieger, R. A.** Water resources of the Flint area, Michigan: U.S. Geol. Survey Water-Supply Paper 1499-E, p. E1-E86, 1963. [Jan. 1964]
- 1191 **Wiitala, S. W.; Newport, T. G.** Aerial observation of ice cover to locate areas of ground-water inflow to streams: Art. 223 in U.S. Geol. Survey Prof. Paper 450-E, p. E148-E149, Mar. 1963.
- 1192 **Wilcox, J. C.** Effects of weather on evaporation from Bellani plates and evapotranspiration from lysimeters: Canadian Jour. Plant Sci. v. 43, no. 1, p. 1-11, Jan. 1963.
- 1507 **Wilcox, J. C.; Mason, J. L.** Suitability for irrigation of water from lakes and streams in the interior of British Columbia: Canada Dept. Agr. Pub. 1179, 27 p., 1963.
- 1194 **Wilcox, L. V.; Resch, W. F.** Salt balance and leaching requirements in irrigated lands: U.S. Dept. Agriculture Tech. Bull. 1290, 23 p., July 1963.
- 1383 **Wilderman, G. H.** Techniques and experiences in well development, in Canada National Research Council, Groundwater, Proceedings of Hydrology Symposium No. 3, Calgary, Alberta, 1962: Ottawa, Canada Dept. Northern Affairs and Natl. Resources, p. 365-375, 1963.
- 1460 **Wilding, M. W.; Rhodes, D. W.** Removal of radioisotopes from solution by earth materials from eastern Idaho: U.S. Atomic Energy Comm. Research and Devel. Rept. IDO-14624, 57 p., Nov. 1963. [Available from U.S. Dept. Commerce, Office of Tech. Services.]
- Wilgain, S.** See Picciotto, E. 0609
- Wilke, H. R.** See Sampayo, F. F. 0840
- 0680 **Willardson, L. S.; Pope, W. L.** Separation of evapotranspiration and deep percolation: Am. Soc. Civil Engineers Proc. Paper 3638, Irrig. and Drainage Div. Jour., v. 89, no. IR 3, p. 77-78, Sept. 1963.
- 1196 **Williams, G. P.** Heat transfer coefficients for natural water surfaces: Internat. Assoc. Sci. Hydrology Pub. 62, p. 203-212, 1963.
- Williams, M. R.** See Swindel, G. W., Jr. 1021
- 1139 **Willis, W. O.; Haas, H. J.; Robins, J. S.** Moisture conservation by surface or subsurface barriers and soil configuration under semiarid conditions: Soil Sci. Soc. America Proc., v. 27, no. 5, p. 577-580, Sept.-Oct. 1963.
- 0957 **Willoughby, L. B.** Conditions affecting runoff-precipitation, in Columbia Basin Water Forecast Comm. ann. mtg., 26th, Portland, Oregon, 1963, Proc.: Portland, Ore., U.S. Soil Conserv. Service, p. 7-8, July 1963.

- 1197 **Wilmoth, B. M.** Riverbed recharge to Quaternary alluvium of the lower Kanawha River Valley [abs.]: West Virginia Acad. Sci. Proc., v. 35, p. 179, 1963.
- Wilroy, R. D.** *See* Ingols, R. S. 0311
- Wilson, Alfonso.** *See* Gatewood, J. S. 0773
- 1348 **Wilson, Andrew W.** Tucson; a problem in uses of water—case history 1, *in* Hodge, Carle, ed., Aridity and man: Am. Assoc. Adv. Science Pub. 74, p. 483-489, 1963.
- 1198 **Wilson, H. D., Jr.** Hydrologic bench marks to distinguish the effects of climate vs. man: Ground Water, v. 1, no. 3, p. 13-14, July 1963.
- 1199 **Wilson, K. V.** Floods of 1960 in Mississippi: Mississippi Board Commissioners Bull. 63-9, 9 p., Sept. 1963.
- 1200 **Wilson, M. R.** Alameda County investigations: California Dept. Water Resources Bull. 13, 196 p., Mar. 1963.
- Winner, M. D., Jr.** *See* Morgan, C. O. 0419
- 1201 **Winner, M. D., Jr.** The Florida Parishes—an area of large, undeveloped ground-water potential in southeastern Louisiana: Baton Rouge, Louisiana Dept. Public Works, 50 p., June 1963.
- 1494 **Winograd, I. J.** Sunshine Valley, *in* Thomas, H. E., and others, Effects of drought in the Rio Grande Basin: U.S. Geol. Survey Prof. Paper 372-D, p. D9-D10, Mar. 1963.
- Winslow, J. D.** *See* Broeker, M. E. 0276
- Wischmeier, W. H.** *See* Olson, T. C. 0574
- 1203 **Witherspoon, D. F.** Runoff from rainfall on small rural watersheds: Eng. Inst. Canada Trans., v. 6, no. A-10, Paper no. EIC-63-CIV-24, 7 p., Nov. 1963.
- Witherspoon, P. A.** *See* Saraf, D. N. 1469
- Wittsell, L. E.** *See* Hobbs, J. A. 0935
- 1463 **Witzigman, F. S.** Determination of fluvial sediment discharge—Methods used in measurement and analysis of sediment loads in streams: U.S. Inter-Agency Comm. on Water Resources, Subcommittee on Sedimentation, St. Anthony Falls Hydraulic Lab. Rept. 14, 151 p., 1963. [Available from Washington, D.C., U.S. Govt. Printing Office.]
- 1212 **Wolbeer, H. J.** The calculated efficiency of monolayers in relation to increased water temperature: Internat. Assoc. Sci. Hydrology, Pub. 62, p. 13-25, 1963.
- Wolf, H. W.** *See* McKee, J. E. 0447
- Wollaston, S. H.** *See* Lettau, H. H. 0488
- 1148 **Wolman, Abel; Bosch, H. M.** United States water supply lessons applicable to developing countries: Am. Water Works Assoc. Jour., v. 55, no. 8, p. 946-956, Aug. 1963.
- 1205 **Wolman, Abel.** Status of water resources use, control, and planning in the United States: Am. Water Works Assoc. Jour., v. 55, no. 10, p. 1253-1272, Oct. 1963.
- 1206 **Wolman, M. G.** Erosion and sedimentation, *in* United States National Report to IUGG, 1960-1963: Am. Geophys. Union Trans., v. 44, no. 2, p. 559-561, June 1963.

- 1207 **Wong, S. T.** A multivariate statistical model for predicting mean annual flood in New England: *Assoc. Am. Geographers Annals*, v. 53, no. 3, p. 298-311, Sept. 1963.
- 1208 **Wood, L. A.; Gabrysch, R. K.; Marvin, Richard.** Reconnaissance investigation of the ground-water resources of the Gulf Coast region, Texas: *Texas Water Comm. Bull.* 6305, 114 p., June 1963.
- Wood, L. A.** *See* Baker, E. T., Jr. 1457
- 1209 **Wood, P. R.; Stacy, B. L.** Preliminary report on the geology and ground-water resources of Woodward County, Oklahoma: Oklahoma City, Oklahoma Water Resources Board, 9 p., App. A-D, 1963.
- 1210 **Woodcock, A. H.; Friedman, Irving.** The deuterium content of raindrops: *Jour. Geophys. Research*, v. 68, no. 15, p. 4477-4483, Aug. 1, 1963.
- 1211 **Woods, P. C.; Orlob, G. T.** The Lost River System, a water quality management investigation: *California Univ. Water Resources Center Contr.* 68, 54 p., Feb. 1963.
- 1396 **Woolhiser, D. A.; Miller, C. R.** Case histories of gully control structures in southwestern Wisconsin: *U.S. Agr. Research Service ARS 41* 60, 28 p., Feb. 1963.
- Work, R. A.** *See* Beaumont, R. T. 0103
- 1213 **Worts, G. F., Jr.** A brief appraisal of ground-water conditions in the coastal artesian basin of British Guiana, South America: *U.S. Geol. Survey Water-Supply Paper* 1663-B, B1-B44, Aug. 1963.
- Wright, J. J.** *See* Lehr, J. H. 0483
- 1214 **Wu, I-Pai.** Design hydrographs for small watersheds in Indiana: *Am. Soc. Civil Engineers Proc. Paper* 3694, *Hydraulics Div. Jour.*, v. 89, no. HY6, p. 35-66, Nov. 1963.
- 1215 **Wyllie, M. R. J.** The fundamentals of well log interpretation: New York, Academic Press, 238 p., 1963.
- 1216 **Yalin, M. S.** An expression for bed-load transportation: *Am. Soc. Civil Engineers Proc. Paper* 3525, *Hydraulics Div. Jour.*, v. 89, no. HY3, p. 221-250, May 1963.
- 1412 **Yamagata, N.; Okita, T.; Kodaira, K.** The runoff of fall-out radiostrontium from a river and its application in hydrology, in *Radioisotopes in hydrology, Proceedings of the Symposium on the Application of Radioisotopes in Hydrology*, Tokyo, 1963: Internat. Atomic Energy Agency Proc. Ser. 71, p. 417-423, 1963. [Available in U.S. from International Publications, Inc., New York, N. Y.]
- Yamanga, George.** *See* Davis, D. A. 0162
- 1217 **Yarlett, L. L.; Moore, J. R.** Management of gulf coast salt marshes: *Jour. Soil and Water Conserv.*, v. 18, no. 4, p. 166-167, July-Aug. 1963.
- 1219 **Yen, Yin-Chao.** Effective thermal conductivity of ventilated snow: U.S. Army Cold Regions Research and Eng. Lab. Research Rept. 103, 14 p., 1963.
- 1221 **Yen, Yin-Chao; Tien, Chi; Bender, J. A.** On the isothermal flow of air through a snow pack with variable permeability: *Internat. Assoc. Sci. Hydrology Pub.* 61, p. 51-61, 1963.
- 1505 **Yen, Yin-Chao.** Heat transfer by vapor transfer in ventilated snow: *Jour. Geophys. Research*, v. 68, no. 4, p. 1093-1101, Feb. 15, 1963.

- 1220 **Yevdjevich, V. M.** Climatic fluctuations studies by using annual flows and effective annual precipitation. *in* Changes of climate: UNESCO Arid Zone Research Ser., v. 20, p. 183-200, 1963.
- 1222 **Yih, Chia-Shun.** Velocity of a fluid mass imbedded in another fluid flowing in a porous medium: Physics of Fluids, v. 6, no. 10, p. 1403-1407, Oct. 1963.
- 1223 **Yih, Chia-Shun.** Stability of liquid flow down an inclined plane: Physics of Fluids, v. 6, no. 3, p. 321-334, Mar. 1963.
- 1397 **York, C. W.** Land and water use in Mad River-Redwood Creek hydrographic unit, preliminary edition: California Dept. Water Resources Bull. 94-7, 80 p., app. A-C, Oct. 1963.
- 1224 **Yost, I. D.** Floods of April-June 1957 in Texas and adjacent states: U.S. Geol. Survey Water-Supply Paper 1652-B, p. B1-B321, Apr. 1963.
- 1225 **Yotsukura, Nobuhiro.** Measurement of sediment-laden flow by means of a circular orifice: Art. 234 *in* U.S. Geol. Survey Prof. Paper 450-E, p. E172-E173, Mar. 1963.
- 1260 **Yotsukura, Nobuhiro.** Turbulent dispersion of miscible materials in open channels, *in* Kornegay, B. H., and others, editors, Transport of radionuclides in fresh water systems: U.S. Atomic Energy Comm. Div. Tech. Inf. TID-7664, p. 311-326, July 1963.
- Young, L. E.** *See* Ray, H. A. 0714
- 1226 **Young, L. E.** Floods near Fortuna, California: U.S. Geol. Survey Hydrol. Inv. Atlas HA-78, one sheet, Aug. 1963.
- 1227 **Young, L. L.** Water power resources in Trask River basin, Oregon, *with sections on* Geology of sites, by R. G. Wayland and David L. Gaskill: U.S. Geol. Survey Water-Supply Paper 1610-B, B1-B44, Sept. 1963.
- Young, R. A.** *See* Carpenter, C. H. 0039
- Youngs, E. G.** *See* Smiles, D. E. 1045
- 1228 **Youngs, E. G.; Smiles, D. E.** The pumping of water from wells in unconfined aquifers—A note on the applicability of Theis' formula: Jour. Geophys. Research, v. 68, no. 20, p. 5905-5907, Oct. 15, 1963.
- 1229 **Zakrzewska, Barbara.** An analysis of landforms in a part of the Central Great Plains: Assoc. Am. Geographers Annals, v. 53, no. 4, p. 536-568, Dec. 1963.
- 1366 **Zeller, Robert.** Summary of current theories and studies relating to temperature prediction, *in* Water temperature—Influences, effects, and control: U.S. Public Health Service Pacific NW Water Lab., Pacific NW Symposium on Water Pollution Research, 12th, Corvallis, Oreg., 1963, Proc., p. 111-156, Nov. 1963.
- 1230 **Zernial, G. A.; Laursen, E. M.** Sediment-transporting characteristics of streams: Am. Soc. Civil Engineers Proc. Paper 3396, Hydraulics Div. Jour., v. 89, no. HY1, p. 117-137, Jan. 1963.
- 1231 **Zitomer, Fred; Lambert, J. L.** Spectrophotometric determination of bromide ion in water: Anal. Chemistry, v. 35, no. 11, p. 1731-1734, Oct. 1963.
- 1232 **Zones, C. P.** Preliminary report on the ground water resources of the Waianae area, Oahu, Hawaii: Hawaii Div. Water and Land Devel. Circ. C16, 12 p., 1963.
- 1233 **Zones, C. P.** Ground water in the alluvium of Kings River Valley, Humboldt County, Nevada: U.S. Geol. Survey Water-Supply Paper 1619-L, p. L1-L38, Apr. 1963.
- Zotikov, L. A.** *See* Shumskiy, P. A. 0890

# INDEX

[The numbers refer to entries in the bibliography]

## Africa

### *Chad Republic*

Salt and water movement in the Bol Guini polder: Dieleman, P. J. 1405

## Agriculture

### *Irrigation*

Mekong River, southeast Asia: White, G. F. 1145

Salt balance and leaching requirements: Wilcox, L. V. 1194

### *Irrigation management*

Effects on surface-water quality: U.S. Public Health Service. 1100

### *Water contamination*

Kansas: McVicker, D. S. 0453

### *Water utilization of*

Need for education: Revelle, Roger. 0720

### *Water-quality research*

Conference: Lunt, O. R. 1299

### *Watershed land use*

Hydrologic changes: Tennessee Valley Authority. 0952

## Alabama

### *Black Warrior River, Holt Lock and Dam*

River survey: U.S. Army Corps of Engineers. 1074

### *Colbert County*

Ground water: Harris, H. B. 0815

### *Escambia County*

Ground water: Cagle, J. W., Jr. 0017

### *Franklin County*

Ground water: Peace, R. R., Jr. 0593

### *Lauderdale County*

Ground water: Harris, H. B. 0816

### *Limestone County*

Ground water: McMaster, W. M. 1484

### *Limestone County, Athens area*

Ground water: McMaster, W. M. 0450

### *Montgomery County*

Ground water: Knowles, D. B. 0382

### *St. Clair County*

Ground-water reconnaissance: Causey, L. V. 0249

### *Surface-water quality, 1960*

Reconnaissance study: Cherry, R. N. 0252

### *Water occurrence and use*

General discussion: Swindel, G. W., Jr. 1021

### *Water problems*

Oil production: Powell, W. J. 1471

## Alaska

### *Anchorage area*

Streams, biologic pollution: Alaska Dept. of Health and Welfare 0071

### *Continental shelf off Seward Peninsula*

Sedimentation: Creager, J. S. 0146

### *Cordova*

Ground water: Walters, K. L. 1131

### *Fairbanks area*

Ground water: Cederstrom, D. J. 0250

### *Homer area*

Ground-water data: Waller, R. M. 1128

### *Ice-dammed lakes*

Stone, K. H. 1010

### *Kenai Peninsula, Ohlson Mountain area*

Water resources: Feulner, A. J. 1317

## Alaska

### *King Salmon area*

Ground-water data: Feulner, A. J. 1316

### *Lakes*

Waterpower investigations: Johnson, Arthur.

0333

### *McCall Glacier*

Ice temperatures, heat flux: Orveg, Svenn.

0576

### *Northwestern*

Seasonal changes in ground-water quality:

Feulner, A. J. 0642

## Alluvial-deposit hydrology

### *Alluvial fans*

Origin, White Mountains, California and Nevada: Beaty, C. B. 0102

Porosity and openings: Bull, W. B. 1479

### *Arkansas River alluvium*

Little Rock to Fort Smith, Arkansas: Bedinger, M. S. 1456

### *Bedrock channels*

Canada, southern Alberta: Farvolden, R. N. 0629

### *Canada*

Regina aquifer: Lissey, A. 1381

### *Ground water in collapse structures*

Cenozoic fill, New Mexico: Cooper, J. B. 0405

### *Ground-water flow*

Tracing with radioisotopes: Knutsson, G.

1413

### *Ground-water supply*

Connecticut, New Haven: Novarro, J. A. 0565

### *Kentucky*

Ohio River valley: Gallaher, J. T. 0741

Ohio River valley: Gallaher, J. T. 0745

Ohio River valley: Gallaher, J. T. 0766

Ohio River valley: Price, W. E., Jr. 1407

### *Lake deposits*

Artesian conditions: Feth, J. H. 0641

### *Maine, southwestern*

Surficial deposits, water-bearing characteristics: Prescott, G. C., Jr.

0625

### *Nevada*

Humboldt County, Kings River Valley:

Zones, C. P. 1233

### *Proglacial stream*

Washington, White River valley: Fahnestock,

R. K. 0627

### *Riverbed recharge*

West Virginia: Wilmoth, B. M. 1197

### *Specific yield*

Unconsolidated alluvium: Preuss, F. A. 0953

### *Specific-yield estimation*

Humboldt River valley: Cohen, Philip. 0235

### *Transmissibility mapping*

Lower Arkansas River valley: Bedinger, M. S.

1426

### *Valley aquifers*

Canada, Saskatchewan: Christiansen, E. A.

1332

### *Antarctica*

*Glaciology, ice budget*

Radioactive measurement: Picciotto, E. 0609

- Antarctica**
- Ice shelves*
    - Bottom melting: Shumskiy, P. A. 0890
  - Ross Ice Shelf*
    - Structure and ice crystallography: Gow, A. J. 0788
  - Theil Mountains*
    - Glaciology: Anderson, B. G. 0051
  - Victoria Land*
    - Patterned ground: Black, R. F. 0130
- Aquifer tests**
- Alluvium, lower Arkansas River valley*
    - Mapping transmissibility: Bedinger, M. S. 1426
  - Analysis for water-sensitive rocks*: Hewitt, C. H. 1388
  - Analysis of data*
    - Composite type curve: Walton, W. C. 1149
  - Application of nonequilibrium formula*
    - Graphic shortcuts: Warren, M. A. 1496
  - Artesian aquifer*
    - Discharge-time relationship: Abu-Zied, M. A. 0056
  - Artesian aquifer, leaky*
    - Nonsteady radial flow: Cooper, H. H., Jr. 0403
  - Artesian aquifer, storage changes*
    - Water-level fluctuations: Thomas, H. E. 1506
  - Coefficient of storage*
    - Simplified graphic determination: Lohman, S. W. 0502
  - Decreasing discharge*
    - General solution: Abu-Zied, M. A. 0056
  - Determination of hydrogeologic boundary*
    - Use of locus circles: Moulder, E. A. 0425
  - Determination of stream diversion*
    - Percentage of well discharge: Theis, C. V. 0975
  - Determination of well spacing*: Theis, C. V. 1406
  - Drawdown*
    - Model analysis: Lehr, J. H. 1428
  - Drawdown calculation*
    - Use of slide rule: Theis, C. V. 0977
    - Vicinity of discharging well: Theis, C. V. 0978
  - Drawdown corrections*
    - Partially tapped aquifer: Jacob, C. E. 0324
  - Drawdown, equilibrium conditions*
    - Aquifer bounded by finite straight-line source: Theis, C. V. 0976
  - Drawdown estimation*
    - Cyclic rates of discharge: Theis, C. V. 1489
  - Drawdown graphs*
    - Simplified: May, H. G. 0540
  - Graphical multiple-regression analysis*
    - Permeability estimation: Jenkins, C. T. 0327
  - Heavily pumped areas*
    - Simplified computations: Conover, C. S. 0398
  - Infinite strip aquifer*
    - Flow field, discharging well with uniform recharge: Brown, R. H. 1450
  - Linear fluid-barrier detection*
    - Well pressure measurements: Davis, E. G., Jr. 0164
  - Mathematical models*: Meneley, W. A. 0658
- Aquifer tests**
- Mississippi*
    - Compilation of data: Harvey, E. J. 0824
    - Mississippi, Alcorn County*
      - Devonian chert: Boswell, E. H. 0138
    - Mississippi, Kosciusko*
      - Pumping tests, upper Wilcox beds: Wasson, B. E. 1155
    - Mississippi, northeastern*
      - Cretaceous beds: Boswell, E. H. 0137
  - Moisture distribution*
    - Time-drainage relations: Prill, R. C. 0955
  - Multiple-well methods*
    - Theory and advantages: Smiles, D. E. 1045
  - Non-equilibrium equations*
    - An assessment: Watt, A. K. 1334
  - Oklahoma, Caddo County*
    - Rush Springs sandstone: Tanaka, H. H. 1022
  - Permeability*
    - Water-table aquifers: Jacob, C. E. 0322
  - Plotting data*
    - Graphic method: LaRocque, G. A., Jr. 0298
  - Rectangular aquifer*
    - Ground-water movement: Brown, R. H. 1451
  - Sandstone reservoir*
    - Effect of stress on permeability: Gray, D. H. 0789
  - Shortcuts and special problems*: Bentall, Ray. 0112
  - Single-boundary problems*
    - Type curves for coefficients: Stallman, R. W. 0995
  - Storage coefficient determination*
    - Neutron moisture probe: Meyer, W. R. 0655
  - Straight-line boundary*
    - Drawdown patterns: Lang, S. M. 0292
  - Techniques*
    - Ground-water evaluation and development: Jones, J. F. 0346
  - Transmissibility determination*
    - Cyclic water-level fluctuations: Ferris, J. G. 0638
    - Residual drawdown in bailed well: Skibitzke, H. E. 0849
    - Slug-injection test: Ferris, J. G. 0639
    - Theis recovery method, Jacob modification: Jacob, C. E. 0323
  - Transmissibility estimation*
    - Specific capacity of wells: Theis, C. V. 0980
  - Unconfined*
    - Storage coefficient determination: Meyer, W. R. 0655
  - Water supply evaluation*
    - Wichita, Kansas: Stramet, G. J. 1013
  - Water-level measurements*
    - Microtime measurements in early part of test: Walton, W. C. 1135
  - Arctic-regions hydrology*
  - Bibliography*
    - Snow, ice and permafrost: U.S. Army, CRREL. 1069
  - Frost penetration*
    - Influence of snow cover: Krinsley, D. B. 0391
  - Ground-water quality*
    - Seasonal changes: Feulner, A. J. 0642

- Arctic-regions hydrology**
- Heat-balance investigation*
  - Alpine snowfield: Ambach, W. 0063
  - Ice and snow**
  - Properties and processes: Kingery, W. D. 0371
  - Snow pack evaporation**
  - Estimation, energy transport model: Bergen, J. D. 0116
  - Surface energy budget**
  - South Pole: Lettau, H. H. 0488
- Arid-regions hydrology**
- Aridity and man*
  - AAAS Symposium: Hodge, Carle. 0948
  - Climatic changes*: U.N. Educ. Sci. Cultural Org. 1345
  - Desert floods**
  - Arizona, southern, Sept. 1962: Lewis, D. D. 0490
  - Evapotranspiration**
  - Estimation from solar radiation: Jensen, M. E. 0683
  - Floods, annual peak**
  - Hydrologic factors: Benson, M. A. 0110
  - Research needed**: Skibitzke, H. E. 0622
  - Runoff variations**
  - Geologic factors: Farvolden, R. N. 0686
  - Soil moisture**
  - Conservation by surface barriers: Willis, W. O. 1139
  - Soil salinization problems**
  - Africa, Lake Chad area: Dieleman, P. J. 1405
  - Surface-energy balance, 1960-61**
  - Preliminary analysis of data: vanBavel, C. H. M. 1106
  - Water and land conservation**
  - Efficient water use: Leopold, L. B. 0486
  - Water budget**
  - Arizona: Thomsen, B. W. 1400
  - Water in the desert**
  - Popular literature: Brown, Slater. 0001
  - Water management**
  - Rio Grande, upper: Hay, John. 0746
  - Valley-wide planning: Thomas, H. E. 0620
  - Water use**
  - Phreatophytes: VanHylckama, T. E. A. 1109
  - Water-resources studies**
  - Summary discussion: Skibitzke, H. E. 0622
  - Water-use problems**
  - Arizona, Tucson area: Wilson, Andrew W. 1348
- Arizona**
- Central Arizona Project*
  - Brief description: Johnson, T. R. 1369
  - Water use, Colorado River: Pugh, C. A. 1370
  - Cochise County, Willcox Basin*
  - Ground-water data: Brown, S. G. 1478
  - Cochise County, San Simon Basin*
  - Hydrologic data analysis: White, N. D. 1187
  - Gila Bend Indian Reservation*
  - Ground-water conditions: Heindl, L. A. 0831
  - Gila River drainage basin*
  - Reconnaissance of headwater springs: Feth, J. H. 0640
- Arizona**
- Graham County, San Simon Basin*
  - Hydrologic data analysis: White, N. D. 1187
  - Graham County, Willcox Basin*
  - Ground-water data: Brown, S. G. 1478
  - Ground water**
  - Annual report, 1962-63: White, N. D. 1186
  - Maricopa County*
  - Ground water: White, N. D. 1395
  - Ground-water conditions: Heindl, L. A. 0831
  - Maricopa County, Sycamore Creek*
  - Water salvage possibilities: Thomsen, B. W. 1400
  - Mogollon Rim region, Verde Valley*
  - Ground water: Twenter, F. R. 1063
  - Navajo and Hopi Indian Reservations*
  - Ground-water quality: Kister, L. R. 0376
  - Ground-water supply data: Davis, G. E. 0165
  - Pinal County*
  - Ground water: White, N. D. 1395
  - Politics of water**: Mann, D. E. 0520
  - Safford Valley*
  - Effects of drought on water resources: Cushman, R. L. 0158
  - Salt River Valley*
  - Evaporation from shallow water: Fritsch, L. J. 0763
  - San Pedro River*
  - Water regimen: Page, H. G. 0583
  - Southern*
  - Floods of Sept. 1962: Lewis, D. D. 0490
  - Tucson area*
  - Water resources: Lewis, D. D. 0489
  - Water use: Wilson, Andrew W. 1348
  - Water resources**
  - Management: Mann, D. E. 0520
  - Water supply**
  - Colorado River: Johnson, T. R. 1369
  - Willcox Basin*
  - Ground-water data: Brown, S. G. 1478
- Arkansas**
- Arkansas River alluvium*
  - Ground water, Little Rock to Fort Smith: Bedinger, M. S. 1456
  - Arkansas River valley, lower*
  - Transmissibility of alluvium: Bedinger, M. S. 1426
  - Arkansas Valley*
  - Ground water: Cordova, R. M. 0406
  - Grand Prairie region*
  - Artificial recharge: Engler, Kyle. 0222
  - Water law**: Mack, L. E. 0515
- Asia**
- Average climatic water balance data*: Mather, J. R. 1486
  - Water-resources development**: U.N. Econ. Comm. Asia Far East. 1236
- Asia, southeast**
- Mekong River Plain*
  - International cooperative water management: White, G. F. 1145
- Baltic Sea**
- Evaporation**
  - Computation from water vapor flux: Palmen, E. 0586

**Bibliography**

- Aerial photographic interpretation:* Johnson, A. I. 1338
- California water agencies*  
Bulletins and reports: Johnson, J. W. 1437
- Colorado State University*  
Research reports, papers, bulletins, and theses: Colorado State University. 1315
- Earth resistivity:* Johnson, A. I. 1338
- Friction factors in open channels:* American Society of Civil Engineers, 0080
- Geological Survey reports*  
Open-file release only, 1962: Weld, B. A. 1181
- Ground water in United States:* Guinness, C. L. 1483
- Grouting with cement:* American Society of Civil Engineers 0070
- Hydrologic techniques:* Johnson, A. I. 1338
- Hydrology:*  
Canada, 1959-1961: Canada National Research Council. 1493
- Irrigation practices*  
Effect on surface-water quality: U.S. Public Health Service. 1100
- Lakes*  
Michigan: Humphrys, C. R. 1324
- Oceanography to 1963:* Federal Council, Sci. and Technology. 1445
- Permeability:* Richter, R. C. 0723
- Pollution control, biological references*  
Sewage treatment, water treatment: Ingram, W. M. 0312
- Radioactive fallout*  
Behavior in soils and plants: Frere, M. H. 1322
- Saline-water conversion:* Kase, K. A. 1465
- Snow, ice and permafrost:* U.S. Army, CRREL. 1069
- Soil exploration:* Johnson, A. I. 1338
- Soils*  
Freezing and thawing: Lunin, Jesse. 0507
- Surface-water quality*  
Rivers and lakes: Livingstone, D. A. 0497
- Surface-water reports*  
Texas: Mills, W. B. 0669
- Water analysis*  
1960-1962: Skoustad, M. W. 0854
- Water in California*  
Periodical literature: Barnes, Cynthia. 1502
- Water quality criteria:* McKee, J. E. 0447
- Water resources*  
West Virginia: Tsai, J. Cha-Hong. 1059
- Water supply and pollution control*  
R.A. Taft San. Eng. Center publications: R.A. Taft San. Eng. Center. 1101
- Water wells:* Giefer, G. J. 0775
- Well logging:* Johnson, A. I. 1338
- Brazil**  
*Ground-water provinces:* Schneider, Robert. 0841
- British Columbia**  
*Columbia River Basin*  
Streamflow conditions, 1962: Ramsden, H. T. 0965
- British Columbia**  
*Lakes*  
Water quality for irrigation: Wilcox, J. C. 1507
- British Guiana**  
*Coastal artesian basin*  
Ground water: Worts, G. F., Jr. 1213
- California**  
*Alameda County*  
Water resources: Wilson, M. R. 1200
- Alameda County, Bay area*  
Ground water: California Dept. of Water Resources. 0512
- Amargosa Desert*  
Ground water: Walker, G. E. 1127
- Ben Lomond Mountain area*  
Watershed geology and beach radioactivity: Byerly, J. R. 1314
- Calaveras area*  
Water resources: Tipton, V. B. 1054
- Central and northern*  
Ground-water conditions, 1959-60:  
California Dept. of Water Resources. 0025
- Central Valley*  
Water management Valley wide: Thomas, H. E. 0620
- Chuckwalla Valley area*  
Ground-water data: Giessner, F. W. 0776
- Deep Springs Valley*  
Alluvial fans: Lustig, L. K. 0509
- Evapotranspiration, climate comparisons*  
Coastal and interior valleys: Nixon, P. R. 0556
- Feather River Basin*  
Runoff forecasting, day-to-day: Arvola, W. A. 1237
- Feather River Project Association*  
Federal State water rights problems:  
Goodcell, R. B., Jr. 0785
- Fortuna area*  
Flood map: Young, L. E. 1226
- Fresno County*  
Alluvial-fan deposits: Bull, W. B. 1479
- Humboldt County, Mad River basin*  
Land and water use study: York, C. W. 1397
- Imperial Valley*  
Geothermal brine well: White, D. E. 1146  
Land drainage for agriculture: Molof, J. J. 0414
- Inyo County*  
Ground-water data: Moyle, W. R., Jr. 0431
- Kern County*  
Ground-water data: Moyle, W. R., Jr. 0431
- Kings River basin*  
Snow cover relations: Court, Arnold. 0409
- Land subsidence*  
San Joaquin Valley: Lofgren, B. E. 0499
- Lassen County, Honey Lake Valley*  
Water resources: Hilton, G. S. 0943
- Los Angeles*  
Water management: Miller, D. T. 0665
- Lost River System*  
Water quality management investigation:  
Woods, P. C. 1211

**California**

- Metropolitan Water District, southern*  
Water management and use: Miller, D. T. 0665
- Mojave Valley, lower*  
Ground-water data: Dyer, H. B. 0201
- North Yuba River basin*  
Snowmelt hydrology: Rantz, S. E. 0707
- Northeastern*  
Ground-water investigations: California Dept. of Water Resources. 0028
- Northern and Central*  
Surface-water flow, 1961: California Dept. of Water Resources. 0027
- Surface-water quality, 1960-61: California Dept. of Water Resources. 0026
- Northern, Tuscan formation*  
Ground water in fracture traces: Burnett, J. L. 1339
- Pacific Coast*  
Effects of drought, 1942-56: Thomas, H. E. 0982
- Palm Springs area, Agua Caliente Spring*  
Hydrology: Dutcher, L. C. 0200
- Point Mugu*  
Ground water: Page, R. W. 0551
- Precipitation during storm*  
Three-dimensional wind flow: Myers, V. A. 0438
- Radioactivity in surface water*  
July-Dec. 1962: California Bur. of Radiological Health. 0023
- 1961 June 1962: California Bur. of Radiological Health. 0022
- Rice Valley*  
Ground-water data: Giessner, F. W. 1432
- Riverside County*  
Ground-water data: Giessner, F. W. 1432
- Riverside County, Chuckwalla Valley area*  
Ground-water data: Giessner, F. W. 0776
- Riverside County, Joshua Tree Nail Monument*  
Ground water reconnaissance: Kunkel, Fred. 0394
- Sacramento River basin*  
Surface water quality: Brennan, Robert. 0271
- Sacramento-San Joaquin Delta*  
Differential subsidence of peatlands: Davis, G. H. 0168
- Saline-water conversion*  
Activities in the State: Brice, D. B. 0273
- San Bernardino area*  
Hydrology: Dutcher, L. C. 0199
- San Bernardino County*  
Ground-water data: Giessner, F. W. 1432
- Ground-water data: Moyle, W. R., Jr. 0431
- San Diego County*  
Lake Wohlford Reservoir: Ford, M. E., Jr. 0757
- Land and water use survey: Johnson, E. C. 0339
- San Diego County, San Luis Rey River basin*  
Potential flood inundation areas: Ray, H. A. 0714
- San Dimas Experimental Forest*  
Effects of site: Krammes, J. S. 1372

**California**

- San Dimas Experimental Forest*  
Vegetation removal and streamflow increase: Rowe, P. B. 0839
- Watershed management research: Hill, L. W. 0942
- San Francisco Bay and tributaries*  
Survey, barriers: U.S. Army Corps of Engineers. 1367
- San Francisco Bay area, south*  
Ground water: California Dept. of Water Resources. 0512
- San Joaquin Valley*  
Pore volume of sediments: Meade, R. H. 1440
- San Joaquin Valley, Arvin-Maricopa area*  
Land subsidence: Lofgren, B. E. 0499
- San Joaquin Valley, southern*  
Effects of drought on water resources: Davis, G. H. 0166
- San Mateo County, Bay area*  
Ground water: California Dept. of Water Resources. 0512
- San Nicolas Island*  
Ground water: Burnham, W. L. 0013
- Santa Barbara County, Point Arguello area*  
Ground water: Evenson, R. E. 0225
- Santa Clara County, Bay area*  
Ground water: California Dept. of Water Resources. 0512
- Southern*  
Nitrogen content, ground water: Navone, Remo. 0460
- Soil moisture: Pillsbury, A. F. 0611
- Water supply conditions, 1960-61: Hansen, R. G. 0808
- Southern, desert areas*  
Land and water use study, 1958: Johnson, E. C. 0340
- State Water Project*  
1963 progress report and discussion: MacRostie, Wayne. 0452
- Trinity County, Mad River basin*  
Land and water use study: York, C. W. 1397
- Upper Salinas River basin*  
Effect of drought on ground-water resources: Gatewood, J. S. 0773
- Vital Valley*  
Ground-water data: Giessner, F. W. 1432
- Water agencies*  
Bulletins and reports: Johnson, J. W. 1437
- Water bibliography*  
Periodical literature: Barnes, Cynthia. 1502
- Water law*  
Pollution and contamination: McKee, J. E. 0447
- Water management*  
Snow zone lands: Anderson, H. W. 0047
- Water quality*  
Lithium survey: Bradford, G. R. 0264
- Water quality criteria*: McKee, J. E. 0447
- Water resources*  
Future economics research: Tolley, G. S. 1336
- Water resources economics*  
Conference: Hall, W. A. 1337

- California**
- Water rights*
    - Federal-State problems: Goodcell, R. B., Jr. 0785
  - Water use economics*
    - Interindustry analysis: Lofting, E. M. 0500
  - Water-resources development*
    - Federal-State cooperation: Dominy, F. E. 0184
  - Watershed erosion*
    - Control, logging rules: Wallis, J. R. 1129
- Canada**
- Alberta*
    - Ground water, geophysical prospecting: Lennox, D. H. 0485
    - Ground water, occurrence and movement: Meneley, W. A. 0649
    - Ground water, supply evaluation: Jones, J. F. 0346
  - Alberta, Andrew area*
    - Ground-water hydrology: LeBreton, E. G. 0308
  - Alberta, Blood Indian Reserve*
    - Ground water: Scott, J. S. 0880
  - Alberta, Devon*
    - Ground-water recharge rate: Farvolden, R. N. 0631
  - Alberta, Driedmeat Lake*
    - Recharge, artificial: Farvolden, R. N. 0632
  - Alberta, east-central*
    - Ground-water hydrology: LeBreton, E. G. 0307
  - Alberta, Edmonton—Red Deer map-area*
    - Bedrock topography: Farvolden, R. N. 0630
  - Alberta, Lloydminster area*
    - Ground-water hydrology: LeBreton, E. G. 0477
  - Alberta, Medicine Hat*
    - Induced infiltration: Meyboom, P. 0643
  - Alberta, southern*
    - Bedrock channels: Farvolden, R. N. 0629
    - Water use, irrigation: Hobbs, E. H. 0946
  - Arctic Archipelago*
    - Glacial temperatures: Muller, Fritz. 0432
  - Bibliography of hydrology 1959–1961: Canada*
    - National Research Council. 1493
  - Chalk River*
    - Emergency decontamination: Meservey, A. B. 0651
  - Ground Water*
    - Geological Survey of Canada program:
      - Brandon, L. V. 0267
    - Humber River drainage net*
      - Quantitative geomorphology: Roberts, M. C. 0725
  - Hydrology*
    - Activities 1963: Canada National Research Council. 0033
  - Nova Scotia, northern*
    - Geochemistry, stream sediments: Holman, R. H. C. 0950
  - Ontario*
    - Ground-water data, 1955–1956: Ontario Water Resources Commission. 0550
- Canada**
- Ottawa*
    - Influence of snow cover on ground temperature: Gold, L. W. 0783
  - Regina aquifer*
    - Hydrogeology: Lissey, A. 1381
  - Saskatchewan, southern*
    - Alluvial-deposit hydrogeology: Christiansen, E. A. 1332
  - Saskatchewan, Wynyard area*
    - Ground water: Greer, J. E. 0791
  - St. Lawrence lowlands*
    - Ground-water hydrology: Roy, R. 1377
  - Water conservation*
    - Authorities: Lord, G. R. 0505
  - Western plains aquifers*
    - Ground water chemistry: LeBreton, E. G. 1379
- Chesapeake Bay**
- Salinity and temperature distributions: Stroup, E. D. 1014*
- Clay**
- Brines*
    - Concentration by clay membranes: Bredehoeft, J. D. 0270
  - Degree of hydration: Chilingar, G. V. 0254*
- Earth manual**
- U.S. Bureau Reclamation: U.S. Bureau of Reclamation. 1082
- Illite**
- Adsorption of ABS<sup>65</sup>: Wayman, C. H. 1164
- Kaolinite**
- Adsorption of ABS<sup>65</sup>: Wayman, C. H. 1166
- Kaolinite and montmorillonite*
- Water retention capacity: Thompson, L. A. 0989
- Montmorillonite*
- Adsorption of water vapor: Roderick, G. L. 0732
- Particles, electric charge*
- Effect on flow, colloidal suspension: Rausch, D. L. 0709
- Pore solutions*
- Changes during compaction: Engelhardt, W. V. 0221
- Reactions with water*
- Permeability loss: Hewitt, C. H. 1388
- Sorption of organic compounds*
- Aqueous solutions: Brindley, G. W. 0275
- Surfactant adsorption*
- ABS<sup>65</sup> on montmorillonite: Wayman, C. H. 1161
- Surfactant sorption*
- Heteronionic clay minerals: Wayman, C. H. 1302
- Swelling of clay shales*
- Heave of spillway structures: Peterson, R. 0606
- Viscosity of suspensions containing bacteria*
- Detergent effects: Wayman, C. H. 1162
- Water films*
- Activation energy for ion movement: Oster, J. D. 0578
- Water flow through*
- Measuring low velocity: Ping, Li Seung. 0612

- Clay**  
*Water movement*  
 Threshold gradient: Miller, R. J. 0667
- Climate**  
*Air-sea interaction*: National Academy of Sciences. 0458  
*Change indicators*  
 New Mexico, Period A.D. 1200-1400: Leopold, L. B. 1307  
*Changes*  
 Causes and effects: U.N. Educ. Sci. Cultural Org. 1345  
*Changes from modern normal*  
 Last 5-6000 years: Lamb, H. H. 0284  
*Constancy and steadiness*  
 Definition: Rosini, Ezio. 0738  
*Cycles*  
 Correlation with water-level fluctuations: Marine, I. W. 0525  
*Effects on hydrology*  
 Distinguished from artificial effects: Wilson, H. D., Jr. 1198  
*Effects on radioactive waste disposal*  
 Earth materials: Richardson, R. M. 1319  
*Fluctuations*  
 Long-term: Veryard, R. G. 1116  
 Study, using streamflow-precipitation relations: Yevdjevich, V. M. 1220  
*Measurement, near glacier*  
 Temperature, humidity, wind: Caisley, B. 0019  
*Net radiation and other factors*  
 Measurement: Cole, J. A. 0240  
*Weather modification*  
 Cloud seeding: Smith, E. J. 0856  
 Water resources management: MacCready, P. B., Jr. 1292
- Climatology**  
*Average climatic water balance data*  
 Asia: Mather, J. R. 1486  
 U.S.S.R.: Mather, J. R. 1425  
*Climatic variation*: Lysgaard, L. 0511  
*Definitions, quantitative*  
 Constancy and steadiness: Rosini, Ezio. 0738  
*En glacial temperature*  
 Long-term measurement: Muller, Fritz. 0432  
*Evapotranspiration*  
 California, coastal and interior valleys: Nixon, P. R. 0556  
*Heat-balance investigation*  
 Alpine snowfield: Ambach, W. 0063  
*Long-term climatic fluctuations*: Veryard, R. G. 1116  
*Planetary air circulation*  
 Weather forecasting: O'Connor, J. F. 0568  
*Precipitation regimes*  
 Upper Colorado River: Marlatt, William. 1485  
*Solar irradiation*  
 Mountain watersheds: Lee, Richard. 0479  
*Surface energy budget*  
 Antarctica, South Pole: Lettau, H. H. 0488
- Clinch River**  
*Studies on fate of radionuclides*: Parker, Frank. 1253
- Coastal-regions hydrology**  
*British Guiana, South America*  
 Artesian basin: Worts, G. F., Jr. 1213  
*Continental shelf*  
 Sedimentation: Creager, J. S. 0146  
*Dune areas*  
 Oregon, ground water: Hampton, E. R. 0801  
*Estuarine meanders*  
 Global distribution: Ahnert, Frank. 0058  
*Flooding*  
 Massachusetts, Cape Cod: Crane, D. A. 1504  
*Geochemistry*  
 Ground water: Singhal, B. B. S. 0846  
*Gulf coast salt marshes*: Yarlett, L. L. 1217  
*Recharge from drainage canals*  
 Use of analog plotter for ground-water management: Sherwood, C. B. 0888  
*Saline ground water*  
 Florida: Sherwood, C. B. 0889  
 Sampling methods: Kohout, F. A. 0386  
*Saline-fresh water mixing*  
 Underground karst pool: Smith, D. B. 1415  
*Saline-water intrusion*  
 Aquifer geology: Isbister, John. 0317  
 Louisiana, Chicot aquifer: Whitman, H. M. 1443  
*Sand-dune areas*  
 Oregon, ground water: Brown, S. G. 0002  
*Sea level variations*  
 Last 20,000 years: Fairbridge, R. W. 1306  
*Sediment movement*  
 Tracing with fluorescent materials: Bruun, Per. 1267  
*Soils*  
 Moisture characteristics: Long, F. L. 0504  
*Tidal inlets*  
 Flow patterns, channeling: Price, W. A. 0954  
*Tide-affected streams*  
 Velocity distribution variations: Craig, F. C. 0141
- Colorado**  
*Arkansas River valley, lower*  
 Phreatophyte growth study: Bittinger, M. W. 1301  
*Arkansas Valley, La Junta to Las Animas*  
 Water management effects: Moulder, E. A. 0427  
*Bent County*  
 Ground-water data: Broom, M. E. 0277  
*Cheyenne County*  
 Irrigation prospects: Boettcher, A. J. 0134  
*Crowley County*  
 Water in Dakota and Purgatoire fms: Weist, W. G., Jr. 1180  
*Emergency water supplies*  
 Ground water: Voegeli, P. T., Sr. 1119  
*Fountain Creek Valley*  
 Aquifer recharge, mathematical model: Trelease, F. J. 0925  
*Frenchman Creek basin*  
 Ground water: Cardwell, W. D. E. 0035  
*Fruitland Mesa project*  
 Water resources development: U.S. Bureau of Reclamation. 1350

- Colorado**
- Ground-water levels*  
Spring, 1963; Skinner, M. M. 0852
  - High Plains, northern*  
Potential ground-water development:  
McGovern, H. E. 0444
  - Kiowa County*  
Irrigation prospects: Boettcher, A. J. 0134
  - Northeastern*  
Ground water, general description:  
Longenbaugh, R. A. 1335
  - Otero County*  
Water in Dakota and Purgatoire fms: Weist,  
W. G., Jr. 1180
  - Research reports, papers, bulletins and theses*  
Bibliography: Colorado State University. 1315
  - Rocky Mountains*  
Snow cover, evaporation: Bergen, J. D. 0116
  - San Luis Valley*  
Effects of drought on water resources:  
McLaughlin, T. G. 0448
  - Summit County*  
Precipitation of metals at confluence, Deer  
Creek and Snake River: Theobald, P. K.,  
Jr. 0961
  - Water management program*  
Colorado State Univ.: Morgan, W. E. 1287
- Colorado River**
- Conference proceedings:* Colorado River Water  
Users Assoc. 1344
  - Water supply*  
Arizona: Johnson, T. R. 1369
  - Water use*  
California: Miller, D. T. 0665  
Central Arizona Project: Pugh, C. A. 1370
- Colorado River basin**
- Effects of drought, 1942-56:* Thomas, H. E. 0983
- Colorado River, upper**
- Precipitation regimes:* Marlatt, William. 1485
- Columbia Basin Project**
- Irrigation*  
Merits of water use program: Mancinko,  
George. 0519
- Columbia River**
- Dispersion*  
Radioactive wastes: Beckman, G. E. 1458
  - History and description:* Lyman, W. D. 0510
  - Hydrologic data*  
Collection program, implementation report:  
Columbia BasinInter-Agency Comm. 1501
  - Radionuclide behavior*  
Radiochemical tracing: Nielsen, J. M. 1250
  - Sediments*  
Analysis and seaward extent: Gross, M. G.  
1323
- Columbia River Basin**
- British Columbia*  
Streamflow conditions, 1962: Ramsden, H. T.  
0965
  - Ground-water storage, 1963:* Holmberg, G. D.  
0969
  - Precipitation, 1962*  
Relation to forecasts: Willoughby, L. B. 0957
- Columbia River Basin**
- Runoff, 1962*  
Outcome of volume forecasts: Simons, W. D.  
0968
  - Streamflow conditions and base flow*  
1962 forecast year: Orem, H. M. 0956
  - Water forecast*  
Forecast for 1963 and outcome of 1962  
forecast: Columbia Basin Water  
Forecast Comm. 0967
  - Water-quality control*  
Management: Towne, W. W. 1265
- Columbia River basin, lower**
- Surface-water records, 1951-60:* U.S. Geological  
Survey. 1392
- Columbia River, lower**
- Water-quality survey*  
Data analysis: Deery, H. A. 1264
- Conferences**
- AAAS Symposium*  
Aridity and man: Hodge, Carle. 0948
  - Agricultural water quality research:* Lunt, O. R.  
1299
  - Arizona Watershed Symposium:* Arizona Water  
Resources Committee. 1373
  - Changes of climate*  
UNESCO and WMO, Rome: U.N. Educ. Sci.  
Cultural Org. 1345
  - Colorado River:* Colorado River Water Users  
Assoc. 1344
  - Detergent contamination*  
Water and sewage systems: Payne, W. J. 1037
  - Engineering geology symposium*  
Idaho State University: Idaho State  
University. 1327
  - Geochemical prospecting*  
Techniques, methods: U.N. Econ. Comm.  
Asia Far East. 1065
  - Great Lakes Research Conference:* University of  
Michigan. 1276
  - Ground Water Recharge and Basin Management:*  
Schiff, Leonard. 1358
  - Ground-water hydrology*  
Agricultural engineering: Clyma, Wayne. 0233
  - Hydrology Symposium No. 3, Groundwater:*  
Canada National Research Council. 1491
  - Ice and snow—properties, processes, applications*  
Massachusetts Inst. Technology, 1962;  
Kingery, W. D. 0371
  - Industrial Waste Conference:* Purdue University.  
1263
  - Interstate Commission on the Potomac River*  
Water resources development: Interstate  
Comm. Potomac River Basin. 1438
  - Nevada Water Conference, 17th, 1963:* Nevada  
Dept. Conserv. 1399
  - Pacific NW Symposium Water Pollution Research*  
Water temperature—Influences, effects, and  
control: Eldridge, E. F. 1360
  - Pollution*  
Hazards, Kansas: Kansas Academy of  
Science. 0353

**Conferences**

- Radioisotopes in hydrology*  
International Atomic Energy Agency, Tokyo, 1963: International Atomic Energy Agency. 0970
- River-basin planning*  
Ft. Belvoir, Virginia, 1963: U.S. Army. 1391
- Sanitary Engineering Conference*  
Quality aspects of water distribution systems: Illinois Department of Public Health. 1359
- Subsurface salt*  
Ground-water relations: Bersticker, A. C. 1355
- Symposium on Exploration Drilling*: Colorado School of Mines. 1342
- Transient Ground Water Hydraulics*  
Colorado State University, 1963: Maasland, D. E. L. 1356
- Water resources economics*  
California University Water Resources Center: Hall, W. A. 1337
- Water-resources development*  
Asia, Far East: U.N. Econ. Comm. Asia Far East. 1236  
United Nations: U.N., Office Secretary-General. 1068
- Western Snow Conference, 1963*  
California: Western Snow Conference. 1241
- Connecticut**  
*New Haven*  
Ground-water development: Novarro, J. A. 0565
- Contamination**
- ABS<sup>45</sup>*  
Adsorption on illite: Wayman, C. H. 1164
- Acid mine water*  
Stratigraphic relations: Hanna, G. P., Jr. 1271
- Color, organic*  
Physical and chemical properties: Black, A. P. 0127
- Color, organic compounds*  
Chemistry, fulvic acids: Black, A. P. 0128
- Detergent, ABS*  
Taste and odor: Cohen, J. M. 0234
- Detergents*  
*ABS<sup>45</sup>* adsorption on montmorillonite: Wayman, C. H. 1161  
Components in water and sewage: Ohio River Valley. 1409  
Concentration during evaporation: Jackson, F. L. 0319  
Effect on viscosity of clay-water suspensions: Wayman, C. H. 1162  
Orsanco detergent subcommittee report: Orsanco Detergent Subcommittee. 0575  
Sorption on heteronionic clay: Wayman, C. H. 1302  
Water and sewage systems: Payne, W. J. 1037
- Evaluation of pesticides and detergents*  
Surface waters, New York, Wolcott Creek: Dugan, P. R. 0191
- Fluoride**  
Radiotracer method for determination: Moore, F. L. 0416

**Contamination**

- Fuel oil*  
Protection methods: Noll, D. C. 0559
- Gas and brackish water*  
Source, occurrence and movement into aquifers: Hodges, A. L., Jr. 1347
- Georgia, Savannah*  
Underground, refined gasoline: McCollum, M. J. 0442
- Ground water*  
Subsurface salt deposits: Bersticker, A. C. 1355  
Tracing: Ogata, Akio. 0570  
Tritium from explosions: Stead, F. W. 0997
- Ground water, nitrogen content*  
Southern California: Navone, Remo. 0460
- Humus derived*  
Organic geochemistry: Swain, F. M. 0992
- Lead**  
Removal by aquatic organisms: Oborn, E. T. 0566
- Legal controls**  
Michigan, ground water: Deutsch, Morris. 0174
- Mine drainage**  
Susquehanna River at Harrisburg, Pennsylvania: Anderson, P. W. 0045
- Mineral determination methods**  
Evaluation: Lishka, R. J. 0496
- Movement in ground-water**  
Slug in glacial outwash: Perlmutter, N. M. 0603
- Oil-field brines**  
Kentucky, Upper Big Pitman Creek basin: Hopkins, H. T. 0690
- Organic compounds, "refractories"*  
Oxidation treatment: Spicher, R. G. 0870
- Organic pigments*  
Geochemistry: Dunning, H. N. 0193
- Pesticides and salinity*  
Irrigation management effects: U.S. Public Health Service. 1100
- Pesticides in water*  
Determination with gas chromatography: Teasley, J. I. 1029
- Radiation, surveillance*  
Oregon, lower Columbia River: Toombs, G. L. 1368
- Radioactive*  
Surface water systems: Kornegay, B. H. 1246  
Tritium fallout from 1961 Soviet tests: Thatcher, L. L. 1390
- Radioactivity*  
Aquifers: Schroeder, M. C. 1448  
Recommended standards and control practice: Tsivoglou, E. C. 1047
- Radioactivity, North Carolina*  
Cistern water, June and August 1962: North Carolina Board of Health. 1430
- Removal**  
Biodegradation of ABS under aerobic and anaerobic conditions: Wayman, C. H. 1165
- Reservoirs**  
Manganese, solution mechanism: Ingols, R. S. 0311

- Contamination**
- Rivers**
    - DDT and dieldrin: Breidenbach, A. W. 1340
    - Saline-water intrusion
      - Unplugged oil-test well: Wait, R. L. 1123
  - Trace elements**
    - Significance to health: Taylor, F. B. 1027
  - Underground**
    - Refined gasoline: McCollum, M. J. 0442
  - Water quality criteria**: McKee, J. E. 0447
  - Wells**
    - Bacterial corrosion and plugging: Amstutz, R. W. 0054
- Dams**
- California**
    - Federal-State cooperation: Dominy, F. E. 0184
  - Colorado River**
    - Proposed: Pugh, C. A. 1370
  - Columbia River**: Lyman, W. D. 0510
  - Earth manual**
    - U.S. Bureau Reclamation: U.S. Bureau of Reclamation. 1082
  - Indiana, Dubois County, Upper Patoka River**
    - Ellsworth damsite investigation: Gray, H. H. 0790
  - Missouri River, Montana**
    - Proposed: U.S. Army Corps of Engineers. 1403
  - Oregon, Prineville**
    - Geology: U.S. Bureau of Reclamation. 1349
  - Potomac River Basin**
    - Proposed, U.S. Army Corps of Engineers: U.S. Army Corps of Engineers. 1070
  - Seepage under**
    - Ground-water hydraulics: Hammad, H. Y. 0800
  - U.S. Department of Interior**
    - Bureau of Reclamation: Terrell, J. U. 1031
  - Delaware**
    - Newark area**
      - Hydrologic and soils map: Boggess, D. H. 0135
    - St. Georges area**
      - Hydrologic and soils map: Adams, J. K. 1468
  - Delaware River**
    - Estuary**
      - Water quality sampling: Ferguson, G. E. 0636
    - Pollution diffusion**
      - Tidal motion: O'Connor, D. J. 0567
  - Delaware River basin**
    - Streamflow characteristics**
      - Relation to environment: Hely, A. G. 0749
    - Water quality**
      - New York State: Archer, R. J. 0043
    - Water-supply characteristics of streams**: Hardison, C. H. 0810
  - Denmark**
    - Water resources legislation**: Christensen, Wilfred. 0257
  - Dowsing**
    - Powers, A. M. 0618
  - Drainage**
  - Alluvium, unconsolidated**
    - Specific yield, estimation: Preuss, F. A. 0953
  - Drainage**
  - California, Imperial Valley**
    - Techniques and program for agriculture: Molof, J. J. 0414
  - California, San Joaquin valley**
    - Hydraulic conductivity calculation: Johnson, W. R. 0343
  - Dewatering, construction**
    - Use of well points: Noble, D. G. 0557
  - Irrigation return flow**
    - Salinity conditions: Wilcox, L. V. 1194
  - Model studies**
    - Flow in steep tile drains: Lembke, W. D. 0484
  - Natural sand aquifer**
    - Determination by centrifuge technique: Prill, R. C. 0955
  - Pattern and streamflow direction**: Morisawa, Maria. 0420
  - Soil moisture**
    - Consumptive use measurement: Willardson, L. S. 0680
  - Tile and surface drainage systems**
    - Hydrologic characteristics: Schwab, G. O. 0842
  - Tile system design**
    - Shallow ground-water flow equations: vanSchilfgaarde, Jan. 0675
  - Water table between open ditches**
    - Model study: Ligon, J. T. 0494
  - Drought**
  - Autocorrelation of rainfall and streamflow**: Matalas, N. C. 0534
  - Causes**
    - Surface-atmosphere interactions: Namias, J. 0457
  - Climatology, analysis**
    - Illinois: Huff, F. A. 0929
  - Effect on streamflow**
    - Georgia, 1954: Thomson, M. T. 1050
  - Effects on water resources**
    - Basins of interior drainage: Thomas, H. E. 0962
    - Colorado River basin: Thomas, H. E. 0983
    - Pacific coast in California: Thomas, H. E. 0982
    - Rio Grande basin: Thomas, H. E. 0984
    - Texas, central and south: Thomas, H. E. 0985
    - United States, southwestern: Thomas, H. E. 0986
  - Forecasting**
    - Statistical method: Gumbel, E. J. 0794
  - Reservoir design**
    - Application of "design period" approach to yield: Stall, J. B. 0872
  - Earthquakes**
    - Increased aquifer pressure**
      - Local eruptions, water and sand: Segerstrom, Kenneth. 1385
  - Egypt**
    - Aswan, High Dam**
      - Seepage hydraulics: Hammad, H. Y. 0800
  - Emergency water supplies**
    - After nuclear attack**: Soule, R. M. 1435
  - Georgia**
    - Atlanta: Stewart, J. W. 1009

- Erosion**
- Burned watersheds*
    - Chemical treatment for retardation: Krammes, J. S. 0389
  - Comparative rates*
    - Grass and forest cover: Walker, E. H. 1126
  - Control*
    - Gully channel changes: Woolhiser, D. A. 1396
    - Logging rules: Wallis, J. R. 1129
    - Piedmont soil: Hendrickson, B. H. 0938
  - Debris flows*
    - White Mountains, California and Nevada: Beatty, C. B. 0102
  - Denudation rates*
    - Related to orogeny: Schumm, S. A. 0923
  - Earth manual*
    - U.S. Bureau Reclamation: U.S. Bureau of Reclamation. 1082
  - Effects of mulch*
    - Experiments with different rates of mulch: Mannerling, J. V. 0521
  - Processes*
    - Dynamical similarity: Scheidegger, A. E. 1387
  - Reduction*
    - Chemical treatment for burned watersheds: Krammes, J. S. 0389
  - Review of research, 1960-1963*: Wolman, M. G. 1206
  - River channels and hill slopes*
    - Simple techniques for measuring: Miller, J. P. 0666
  - River sediment*
    - Sources and transport: Wark, J. W. 1153
  - Seasonal variation from hillslopes*
    - Colorado, western: Schumm, S. A. 0921
  - Soil-loss equation*
    - Variable soil-erodibility factor: Olson, T. C. 0574
  - Solution and precipitation of metals*
    - Colorado, confluence of Deer Creek and Snake River: Theobald, P. K., Jr. 0961
  - Stream channels*
    - Cohesive soils, prediction methods: Flaxman, E. M. 0753
    - Increased flow from irrigation drainage: Miller, C. R. 0663
  - Wind*
    - Prediction from wind velocity and precipitation: Cheipil, W. S. 0251
- Estuarine hydrology**
- Hydraulic geometry*
    - Shallow estuarine: Langbein, W. B. 0294
  - Meanders*
    - Global distribution: Ahnert, Frank. 0058
  - Salinity and temperature distributions*
    - Chesapeake Bay: Stroup, E. D. 1014
  - Sediment transport*
    - Sorbed radionuclides: Kaufman, W. J. 1252
  - Sedimentation*
    - Columbia River: Gross, M. G. 1323
  - Tidal estuary*
    - Hydraulic geometry: Myrick, R. M. 0439
  - Tidal inlets*
    - Flow patterns, channeling: Price, W. A. 0954
- Estuarine hydrology**
- Tidal motion*
    - Analysis of diffusion data: O'Connor, D. J. 0567
  - Tide-affected streams*
    - Calculating momentary discharge: Rantz, S. E. 0706
  - Water quality sampling*
    - Automatic: Ferguson, G. E. 0636
- Evaporation**
- Air-sea interaction*: National Academy of Sciences. 0458
  - Alpine snowfield*
    - Heat-balance investigation: Ambach, W. 0063
  - Arid regions*
    - Surface-energy balance: vanBavel, C. H. M. 1106
  - Baltic Sea*
    - Computation from water vapor flux: Palmen, E. 0586
  - Bellani evaporimeters*
    - Climatic effects: Wilcox, J. C. 1192
  - Computation procedures*
    - Comparison: Stephens, J. C. 0998
  - Consumptive relations*
    - Irrigation scheduling: Hansen, V. E. 1408
  - Control*
    - Monomolecular films: Michael, Curtis. 0659
  - Control suppression*
    - Evaluation, energy-budget and mass-transfer methods combined: Frenkiel, J. 0761
  - Determination*
    - Energy-budget and mass-transfer methods combined: Frenkiel, J. 0761
  - Estimation, watersheds*
    - Niinivaara's method: Kaitera, Pentti. 0352
  - Excess concentration of surfactants*
    - Air-water interface: Jackson, F. L. 0319
  - Measurement*
    - Portable lysimeter: Libby, F. J. 0492
    - Relationship of can to pan measurements: Davis, J. R. 0169
  - Measurement, water vapour transport*
    - Windspeed and humidity: Keijman, J. Q. 0360
  - Micrometeorological methods*
    - Research: Fritschen, L. J. 0764
  - Pan measured*
    - Related to streamflow: Tschinkel, H. M. 1060
  - Pans*
    - Seasonal variation: Nordenson, T. J. 0560
  - Persian Gulf*: Sugden, W. 0991
  - Rate increased*
    - Foreign molecules adsorbed on water surface: Kingdon, K. H. 0370
  - Rates*
    - Mountainous terrain: Peck, E. L. 0594
  - Relation to evapotranspiration*: Weaver, H. A. 1170
  - Review of research*
    - 1960-1963: Roberts, W. J. 0726
  - Shallow water*
    - Energy exchange, magnitude: Fritschen, L. J. 0763

**Evaporation***Snow cover*

Estimation energy transport model: Bergen, J. D. 0116

*Snow pack*

Factors: Peak, G. W. 1242

*Snow, South Pole*

Surface energy budget: Lettau, H. H. 0488

*Soil surface*

Effect of mulches: Benoit, G. R. 0109

**Evaporation suppression***Brush land*

Hexadecanol: Anderson, H. W. 0083

*Forests, red fir*

Hexadecanol: Anderson, H. W. 0083

*Hexadecanol*

Soil, vegetation, and snow: Anderson, H. W. 0083

*Monomolecular films*

Brief description: Myers, L. E. 1371

Effects of wind: Crow, F. R. 0152

Evaluation methods: Walter, J. 1130

Ideal surface behavior: LaMer, V. K. 0287

Research, 1959-60: Koberg, G. E. 0384

*Reservoirs*

Water temperature and monolayer efficiency: Wolbeer, H. J. 1212

*Soil*

Hexadecanol: Anderson, H. W. 0083

Surfactants, laboratory evaluation: Mistry, P. D. 0410

*Survey of methods*: American Water Works Association. 0079**Evapotranspiration***Coastal and interior valley areas*

California: Nixon, P. R. 0556

*Computation procedures*

Comparison: Stephens, J. C. 0998

*Determination*

Solar radiation: Carreker, J. R. 0243

*Determining consumptive use*

Climatological and irrigation data: Blaney, H. F. 0131

*Effect on dry-weather stream flow*

Oklahoma: Clark, W. E. 0261

*Estimation*

Can and pan evaporation: Davis, J. R. 0169

*Evapotranspirometer*

Evaluation of accuracy and validity: Ward, R. C. 0688

*Lysimeters*

Climatic effects: Wilcox, J. C. 1192

*Measurement*

Estimation from solar radiation: Jensen, M. E. 0683

Evapotranspirometer data compared with Thorntwaite and Penman methods: Ward, R. C. 0688

*Measurement, ground-water flow*

Water table to soil surface: Doering, E. J. 0182

**Evapotranspiration***Micrometeorological methods*

Research: Fritsch, L. J. 0764

*Potential*

Relation to evaporation: Weaver, H. A. 1170

*Precipitation interception*

Reappraisal: Goddell, B. C. 0782

*Radiation and climatic factors*

Measurement: Cole, J. A. 0240

*Reduction and control*

Soil moisture research: Olson, R. V. 1431

*Reduction research*

Watershed vegetation: Hill, L. W. 0942

*Separate from percolation*

Consumptive use measurement: Willardson, L. S. 0680

*Soil moisture*

Relations: Visser, W. C. 1118

*Streamflow relations*

During long dry periods: Tschinkel, H. M. 1060

*Suppression*

Hexadecanol: Anderson, H. W. 0083

*Variation*

Methods for extrapolation: Cole, J. A. 0240

*Water use studies*

Tanks: Cohen, Philip. 1346

**Far East***Water-resources development*: U.N. Econ.

Comm. Asia Far East. 1236

**Federal Water Pollution Control Act**

*U.S. Senate Special Subcommittee hearings*: U.S. Congress, Senate. 1402

**Flood control***Illinois*

Embarrass River: Illinois Division of Waterways. 1447

*Missouri Basin*

U.S. Corps of Engineers program: Seedlock, R. F. 0883

*Oregon*

South Coast Basin: Oregon Water Resources Board. 1040

*Reservoirs, multi-purpose*

Operation, minimizing interference: Beard, L. R. 0101

*Small watershed planning*: Brown, C. B. 0278**Flood plains***Changes*

Kansas, Cimarron River: Schumm, S. A. 0922

*Lower Missouri River*

Landforms: Schmudde, T. H. 0916

**Floods***Bank storage*

Effects on ground-water storage: Cooper, H. H., Jr. 0513

*Desert*

Arizona, southern, 1962: Lewis, D. D. 0490

*Effect on ground-water*

Movement and bank storage: Cooper, H. H., Jr. 0404

*Far Western States, description*

Dec. 1955-Jan. 1956: Hofmann, Walter. 1320

*Far Western States, streamflow data*

Dec. 1955-Jan. 1956: Hofmann, Walter. 1321

- Floods**
- Forecasting*
    - Extension of rating curves: Sittner, W. T. 0847
    - Mathematical models of watersheds: Amorochio, J. 0055
  - Frequency*
    - Based on short-term record extremes: Conover, W. J. 0401
    - Estimation techniques, rare floods: Alexander, G. N. 0072
  - Glacial-ice-dammed lakes*: Stone, K. H. 1010
  - Magnitude and frequency*
    - Wyoming: Carter, J. R. 0246
  - Mean annual*
    - Drainage density relations: Carlston, C. W. 0037
  - Michigan*
    - Shiawassee River basin: Michigan Water Resources Commission. 1441
  - Mississippi, 1960*
    - Rainfall and peak discharge data: Wilson, K. V. 1199
  - Ohio*
    - Scioto River basin: Ohio Division of Water. 0572
  - Peak discharge, annual*
    - Related to hydrologic factors: Benson, M. A. 0110
  - Peak discharge computations*
    - Culverts: Jenkins, C. T. 0328
  - Prediction of mean annual*
    - Multivariate statistical model: Wong, S. T. 1207
  - Probability estimation*
    - Specific time intervals: Hall, W. A. 0684
  - River-bed scouring*
    - Measurement: Ariizumi, Akira. 0963
  - Routing*
    - Channel storage coefficients: Brakensiek, D. L. 0266
  - Snake River basin*
    - Magnitude and frequency: Thomas, C. A. 0981
  - Texas and adjacent states*
    - April-June 1957: Yost, I. D. 1224
  - United States*
    - Description and data 1958: U. S. Geological Survey. 1088
    - Description and data 1957: U.S. Geological Survey. 1490
  - Waves in prismatic channels*
    - Flood routing: Henderson, F. M. 1498
- Florida**
- Central*
    - Calcium carbonate saturation, ground water: Back, William. 0084
    - Dolomite solubility: Hsu, K. J. 1044
  - Clay County, Brooklyn Lake*
    - Hydrology: Clark, W. E. 0226
  - Dade County, Snake Creek Canal area*
    - Hydrology: Leach, S. D. 0306
  - Everglades*
    - Soil moisture study, organic soil: Harrison, D. S. 0817
- Florida**
- Flagler County*
    - Ground water: Bermes, B. J. 0119
    - Ground-water data: Bermes, B. J. 0118
    - Surface-water resources: Kenner, W. E. 0366
  - Floridan aquifer, Seminole County*
    - Hydrologic map: Hoy, N. D. 0696
  - Fort Lauderdale area*
    - Ground-water management: Sherwood, C. B. 0888
  - Polk County*
    - Water-resources data: Stewart, H. G. 1007
  - Putnam County*
    - Ground water: Bermes, B. J. 0119
    - Ground-water data: Bermes, B. J. 0118
    - Surface-water resources: Kenner, W. E. 0366
  - Seminole County, Floridan aquifer*
    - Hydrologic map: Hoy, N. D. 0696
  - Soils*
    - Moisture characteristics: Stewart, E. H. 0990
  - Southern*
    - Evaporation, computation procedures: Stephens, J. C. 0998
    - Saline-water intrusion: Sherwood, C. B. 0889
  - Southwestern swamps*
    - Sedimentation: Scholl, D. W. 0918
  - St. Johns County*
    - Ground water: Bermes, B. J. 0119
    - Ground-water data: Bermes, B. J. 0118
    - Surface-water resources: Kenner, W. E. 0366
  - Fluid flow**
    - Clay-water suspensions*
      - Viscosity, effects of detergent: Wayman, C. H. 1162
    - Concrete pipe*
      - Flow formulas and friction: Swanson, H. V. 1016
    - Dynamics*
      - Surface water: Frenkiel, F. N. 1311
    - Eddies*
      - Role of: Rouse, Hunter. 0739
    - Gas in consolidated porous media*
      - Laboratory test method: Miller, J. S. 0644
    - Ground water*
      - Measuring low velocity in clays: Ping, Li Seung. 0612
    - Laminar*
      - Stability down inclined plane: Yih, Chia-Shun. 1223
    - Oil and gas into a single well*
      - Analysis of pressure transients: Martin, J. C. 0528
    - Open channels, around objects*
      - Solution at low Reynolds numbers: Whitaker, S. 1141
    - Porous tubes*
      - Laminar entry: Hornbeck, R. W. 0694
    - Problem solutions*
      - Hydraulics handbook: King, H. W. 0369
    - Rheology*
      - Laboratory handbook: VanWazer, J. R. 1113
    - Turbulent*
      - Wall region: Tien, C. L. 1053

- Forests**
- Cutting*
    - Increased water yields: Trimble, G. R., Jr. 1058
  - Erosion control*
    - Logging rules: Wallis, J. R. 1129
  - Management*
    - Effects on streamflow: Reinhart, K. G. 0930
  - Management and water supply*: Cliff, E. P. 0230
  - Timber management*
    - Washington, Cedar River watershed: Thompson, A. E. 0988
- Geochemistry**
- Acid mine water*
    - Stratigraphic relations: Hanna, G. P., Jr. 1271
  - Aqueous solutions*
    - Review of research 1960-1963: Hem, J. D. 0834
  - Calcium-carbonate saturation*
    - Ground water: Back, William. 0084
  - Canada, western plains aquifers*
    - Regional analysis: LeBreton, E. G. 1379
  - Carbonate equilibria*
    - Hydrogen ion buffering: Weber, W. J., Jr. 1173
  - Carbonate movement and deposition*
    - Soils: Arkley, R. J. 0041
  - Carbonate solution and movement*
    - Traced with carbon isotopes: Vogel, J. C. 0959
  - Chemical equilibrium*
    - Ground water: Hem, J. D. 0833
  - Clays, heteronionic minerals*
    - Surfactant sorption: Wayman, C. H. 1302
  - Clay-water relations*
    - Sorption of non-ionic aliphatic organic molecules: Brindley, G. W. 0275
  - Data*
    - Composition, rivers and lakes: Livingstone, D. A. 0497
  - Dating techniques*
    - Snow: Vickers, W. W. 1117
  - Dolomite solubility*
    - Florida ground waters: Hsu, K. J. 1044
  - Geothermal brine*
    - Tapped in mile-deep well: White, D. E., 1146
  - Ground water*
    - Chemical analyses, different geological environments: White, D. E. 1401
    - Coastal area, India: Singhal, B. B. S. 0846
    - Effect of microorganisms: Kuznetsov, S. I. 0395
  - Humus*: Swain, F. M. 0992
  - Major world rivers*
    - Minor element content, implications: Durum, W. H. 0198
  - Manganese dioxide solution*
    - Tannic acid: Rawson, Jack. 0713
  - Manganese in water*
    - Chemical equilibria: Hem, J. D. 0836
    - Chemical equilibria and oxidation: Hem, J. D. 0835
  - Manganese oxidation rate*
    - Solutions in feldspathic sand: Hem, J. D. 0747
  - Mechanism of manganese solution*: Ingols, R. S. 0311
- Geochemistry**
- Mineral determination methods*
    - Evaluation: Lishka, R. J. 0496
  - Organic*
    - Silica: Siever, Raymond. 0891
  - Organic pigments in water*: Dunning, H. N. 0193
  - Precipitation of aluminum, iron and manganese*
    - Stream junction: Theobald, P. K., Jr. 0961
  - Radioisotopes in solution*
    - Removal by earth materials: Wilding, M. W. 1460
- Sediment under transport**
- Heterogeneous equilibria: Bradley, W. F. 1248
- Soils**
- Malachite-azurite equilibrium: Wayman, C. H. 1168
  - Southern Great Plains: Mathers, A. A. 0537
- Springs**
- New Mexico, Socorro County: Hall, F. R. 0798
- Stream sediments**
- Mineralogy and exchange capacity: Kennedy, Vance. 1249
  - Nova Scotia: Holman, R. H. C. 0950
- Stream water and sediments**
- Prospecting methods and techniques: U.N. Econ. Comm. Asia Far East. 1065
- Strontium**
- Natural waters: Skougstad, M. W. 0853
- Subsurface brine concentration**
- Clay membrane mechanism: Bredehoeft, J. D. 0270
- Water**
- Review of research, 1960-1963: Durum, W. H. 0197
- Geomorphology**
- Alluvial streams*
    - Mechanisms of turns: Carey, W. C. 0036
  - Central Great Plains*
    - Drainage patterns and landforms analysis: Zakrzewska, Barbara. 1229
  - Channel stability*
    - Cohesive soils: Flaxman, E. M. 0753
  - Denudation rates*
    - Related to orogeny: Schumm, S. A. 0923
  - Drainage density*
    - Streamflow relations: Carlson, C. W. 0037
  - Drainage networks*
    - Simulation by computer: Schenck, Hilbert, Jr. 0912
  - Drainage pattern*
    - Humber River, Southern Ontario: Roberts, M. C. 0725
    - Stream-flow direction: Morisawa, Maria. 0420
  - Drainage patterns*
    - Comparison on different maps: Giusti, E. V. 0779
  - Earthquakes*
    - Local eruptions, water and sand: Segerstrom, Kenneth. 1385
  - Flood plain*
    - Lower Missouri River: Schmutte, T. H. 0916
  - Flood-plain changes*
    - Kansas, Cimarron River: Schumm, S. A. 0922

**Geomorphology**

- Hillslope erosion*
  - Colorado, western: Schumm, S. A. 0921
- Meanders*
  - Spiral flow: Tanner, W. F. 1024
- Meanders, estuarine*
  - Global distribution: Ahnert, Frank. 0058
- Multivariate statistics*
  - Mean annual flood prediction: Wong, S. T. 1207
- Proglacial stream*
  - Washington, White River valley: Fahnestock, R. K. 0627

*Quantitative analysis*

- Runoff variations in arid regions: Farvolden, R. N. 0686

*River channel and hill slope erosion*

- Simple techniques for measuring: Miller, J. P. 0666

*River channel changes*

- Oklahoma, Sandstone Creek: Bergman, D. L. 0117

*Sediment sources and transport*

- Potomac River basin: Wark, J. W. 1153

*Stream frequency*

- Comparison on different maps: Giusti, E. V. 0779

*Subsidence*

- Formation of ridges in peatland: Davis, G. H. 0168

**Georgia***Atlanta area*

- Emergency water supplies: Stewart, J. W. 1009

*Bartow County*

- Ground water: Croft, M. G. 0148

*Bryan County*

- Ground water: Counts, H. B. 0408

*Catoosa County*

- Ground water: Cressler, C. W. 0147

*Chatham County*

- Ground water: Counts, H. B. 0408

*Coastal plain*

- Soil moisture characteristics: Long, F. L. 0504

*Dawson County, Georgia nuclear laboratory*

- Infiltration rates, weathered crystalline rocks: Stewart, J. W. 1008

*Decatur County, Bainbridge Air Base*

- Ground-water resources: Sever, C. W. 1475

*Dougherty County*

- Ground water: Wait, R. L. 1122

*Drought, 1954*

- Effect on streamflow: Thomson, M. T. 1050

*Effingham County*

- Ground water: Counts, H. B. 0408

*Glynn County*

- Salin-watr intrusion, unplugged oil-test well: Wait, R. L. 1123

*Ground-water quality*

- Crystalline rocks: Callahan, J. T. 0032
- Iron content: Joyner, B. F. 0351

*Lee County*

- Ground water: Owen, Vaux, Jr. 0581

*Liberty County*

- Ground water: Counts, H. B. 0408

**Georgia***Mitchell County*

- Ground water: Owen, Vaux, Jr. 0582

*Savannah*

- Underground accumulation, refined gasoline: McCollum, M. J. 0442

*Savannah area*

- Ground water: Counts, H. B. 0408
- Land subsidence: Davis, G. H. 1466

*Sumter County*

- Ground water: Owen, Vaux, Jr. 0581

*Water resources research*

- Cooperative projects: Peyton, Garland. 0608

**Glacial-deposit hydrology***Aquifer recharge rates*

- Indiana, Lake County: Rosenshein, J. S. 0737

*Data*

- Permeability of glacial till: Norris, S. E. 0563

*Drift-filled bedrock valley*

- Location by gravity anomaly: McGinnis, L. D. 0443

*Ground-water contamination*

- Movement of waste discharge: Perlmutter, N. M. 0603

*Ground-water exploration*

- Power auger: Bailey, N. G. 0086

*Ice-dammed lakes*

- Alaska: Stone, K. H. 1010

*Irrigation of glacial till soil*

- Presence of shallow saline ground water: vonSchaik, J. C. 1442

**Michigan**

- Menominee County: Vanlier, K. E. 1111

**Minnesota**

- Kittson County, Halma-Lake Bronson area: Schiner, G. R. 0914

- Morrison County, Camp Ripley: Jones, J. R. 0347

*Proglacial stream*

- Morphology and hydrology: Fahnestock, R. K. 0627

*Recharge to glacial till*

- Washington, Puget Sound area: Kimmel, G. E. 0368

*Washington*

- Tacoma area: Walters, K. L. 1099

**Glaciers***Alaska, McCall*

- Ice temperature, heat flux: Orveg, Svenn. 0576

*Antarctica, Theil Mountains*

- Anderson, B. G. 0051

*Atmosphere above, measurement*

- Temperature, humidity, wind: Caisley, B. 0019

*Borehole measurements*

- Athabasca glacier: Savage, J. C. 0905

*Changes*

- West Greenland: Weidick, A. 1176

*Emmons Glacier*

- Proglacial stream morphology and hydrology: Fahnestock, R. K. 0627

*Flow and ablation*

- Theory: Kingery, W. D. 0371

- Glaciers**
- Fluctuations*
    - Crillon Glacier, Alaska: Goldthwait, R. P. 0784
  - Heat balance, bottom surface*
    - Melting point: Weertman, J. 1174
  - Mass balance, melting, movement*
    - Bibliography: U.S. Army, CRREL. 1069
  - Movement*
    - Measurement with glacier wheel: Ward, W. H. 1151
    - Numerical and experimental method for determination: Haefeli, R. 0797
  - Temperature*
    - Measurement: Muller, Fritz. 0432
  - Water budget records*
    - Instrumentation: Tangborn, W. V. 1023
- Glaciology**
- Geometry and movement*
    - Athabasca glacier: Paterson, W. S. B. 0589
  - Ice flow law*
    - Athabasca glacier: Paterson, W. S. B. 0590
- Glossary**
- Water and sewage engineering*
    - German, English, French, Italian: Meinck, Fritz. 0546
- Great Basin, The**
- Surface-water records*
    - Streamflow and reservoir data, 1951-1960: U.S. Geological Survey. 1092
- Great Britain**
- Water resources*
    - Pollution and supply legislation: Scott, G. T. G. 0879
- Great Lakes**
- Lake Michigan*
    - Radioactivity levels: Risley, Clifford, Jr. 1281
    - Water quality study: Kehr, W. Q. 1266
  - Lake Superior*
    - Temperature profiles and climatological data: Anderson, D. V. 1283
  - Michigan*
    - Water resources: Marks, W. D. 1503
  - Water levels*
    - Natural regulation: Bajorunas, L. 1282
- Great Plains**
- Erosion, wind*
    - Prediction from wind velocity and precipitation: Cheipil, W. S. 0251
- Great Salt Lake**
- Dissolved-mineral inflow*
    - Surface water: Diaz, A. M. 0178
- Greece**
- Karst ground water*
    - Tracing movement with tritium: Burdon, D. J. 1410
- Greenland**
- Glacial variations*
    - Postglacial time: Weidick, A. 1176
  - Ice sheet*
    - Extra-terrestrial dust, sampling: Langway, C., Jr. 0297
- Ground water**
- Age and movement*
    - Dating with carbon isotopes: Vogel, J. C. 0959
  - Ground water*
  - Age determination*
    - Carbon-14 and tritium compared: Münnich, K. O. 0973
  - Agent in geologic processes*
    - Use in geologic studies: Maxey, G. B. 0539
  - Analysis of long-term fluctuations*
    - Illinois: Russell, R. R. 0901
  - Artificial recharge*
    - Basin design, operation: American Water Works Association. 0073
  - United States, projects in operation:*
    - American Water Works Association. 0074
  - Detergents biodegradation*
    - Anaerobic conditions: Wayman, C. H. 1169
  - Distribution of bacteria in:*
    - Kuznetsov, S. I. 0395
  - Dolomite aquifers*
    - Specific-capacity data analysis: Walton, W. C. 1136
  - Emergency supply*
    - Colorado: Voegeli, P. T., Sr. 1119
  - Fe-Mg biological activity suppression*
    - Chemical injection wells: Pittendreigh, L. M. 0613
  - Flow lines*
    - Toward effluent stream: Lehr, J. H. 0481
  - Flow through porous media*
    - Scale-up laws for two phase: Nielsen, R. L. 0476
  - Geochemistry, data*
    - Chemical analyses, different geological environments: White, D. E. 1401
  - Hydrology*
    - ASAE meeting, Dec. 1962: Clyma, Wayne. 0233
  - Illinois*
    - Mineral content: Larsen, T. E. 0300
  - Inflow to streams*
    - Location from aerial observation: Wiitala, S. W. 1191
  - Levels*
    - New Mexico, 1963: West, S. W. 1183
  - Movement*
    - Analog models: Lehr, J. H. 0483
    - Filtration velocity measurement: Moser, H. 0958
    - Flow diagrams, distortion with exaggerated vertical scale: vanEverdingen, R. O. 1098
    - Model for flow line observation: Lehr, J. H. 0482
    - Small drainage basins: Toth, J. 1057
    - Stratification, estimation: Iwai, S. 0972
  - Primer*
    - Baldwin, H. L. 0093
  - Quality*
    - Iron, Georgia: Joyner, B. F. 0351
  - Reverse water-level fluctuations*
    - Causes: Andreasen, G. E. 0044
  - Review of research, 1960-1963:*
    - LaMoreaux, P. E. 0289
  - Saline, in glacial till soil*
    - Irrigation problems: vonSchaik, J. C. 1442
  - Sand-plains hydrology—movie*
    - Wisconsin, Little Plover River project: Weeks, E. P. 1175

- Ground water**
- Specific yield*
    - Prediction from subsoil cores: Perrier, E. R. 0604
  - Storage*
    - Economics of utilization: Vaseen, V. A. 1115
  - Storage capacity*
    - Specific yield, unconsolidated alluvium: Preuss, F. A. 0953
  - Supply and management*
    - Problems: Harden, R. W. 1290
  - Temperature*
    - Variations with land-surface conditions: Pluhowski, E. J. 0614
  - United States*
    - Role in national water situation: McGuinness, C. L. 1483
  - United States, northwestern*
    - Levels, 1956-60: U.S. Geological Survey. 1089
  - United States, southwestern*
    - Levels, 1956-60: U.S. Geological Survey. 1090
  - Utilization*
    - Economics: Koenig, Louis. 0385
  - Water-table fluctuations*
    - Correlation with climatic cycles: Marine, I. W. 0525
- Ground-water development**
- Hawaii, Molokai, Irrigation Project*
    - Ground-water storage and depletion: Hirashima, G. T. 0945
  - Irrigation*
    - Excess salt accumulation: Sadler, L. D. M. 1382
  - Lunar rocks, water extraction*
    - Use of nuclear explosives: Heckman, R. A. 1449
- Ground-water hydraulics**
- Aquifer constants*
    - Determination: Bentall, Ray. 0113
  - Aquifers, water-table*
    - Permeability determination: Jacob, C. E. 0322
  - Artesian aquifer*
    - Nonsteady flow for wells with decreasing discharge: Abu-Zied, M. A. 0056
  - Artesian aquifer, leaky*
    - Radial flow curves: Cooper, H. H., Jr. 0403
  - Bank storage*
    - Floods: Cooper, H. H., Jr. 0513
  - Capillary pressure curves*
    - Evaluation of reservoir rocks: Rieckmann, Martin. 1295
  - Dispersion*
    - Heterogeneous materials: Skibitzke, H. E., 0850
    - Longitudinal and lateral: Harleman, D. R. F. 1477
    - Relation to permeability and grain size: Harleman, D. R. F. 1476
  - Drawdown, equilibrium conditions*
    - Aquifer bounded by finite straight-line source: Theis, C. V. 0976
  - Drawdown estimation*
    - Cyclic discharge: Brown, R. H. 0282
  - Ground-water hydraulics*
  - Drawdown patterns*
    - Aquifer with straight-line boundary: Lang, S. M. 0292
  - Flow patterns*
    - Prairie drainage model: Meyboom, P. 1376
  - Flow studies*
    - Theoretical aspects: Scheidegger, A. E. 1378
  - Flow through sand*
    - Laminar and turbulent: Anandakrishnan, M. 0053
  - Flow velocity*
    - Computation from temperature distribution: Stallman, R. W. 0875
    - Fluids of different viscosities: Yih, Chia-Shun. 1222
  - Heterogeneous media*
    - Unstable miscible displacement: Koval, E. J. 0388
  - Infinite strip aquifer*
    - Discharging well: Brown, R. H. 1450
  - Leaky aquifer*
    - Flow to eccentric well, lateral recharge: DeWiest, R. J. M. 0177
  - Multiaquifer wells*
    - Water-level fluctuations: Sokol, Daniel. 0868
  - Naturally fractured reservoirs*: Warren, J. E. 1154
  - Non-equilibrium equations*
    - An assessment: Watt, A. K. 1334
  - Permeability*
    - Related to porosity and surface areas: Chilingar, G. V. 0253
    - Relation to dispersion of grain size: Harleman, D. R. F. 1476
  - Permeability determination*
    - Bibliography: Richter, R. C. 0723
  - Potential distribution*
    - Nonpenetrating well: Selim, M. A. 0884
  - Radial collector wells*
    - Line-source recharge: Milojevic, Miloje. 0670
  - Recharging wells*
    - Porous media model: Mobasher, Fereidoun. 0411
  - Rectangular aquifer*
    - Bounded by four canals: Brown, R. H. 1451
  - Seepage under dams*
    - Flow pattern, pressure and relief: Hammad, H. Y. 0800
  - Shallow flow equations*
    - Drainage system design: vanSchilfgaarde, Jan. 0675
  - Single-boundary aquifers*
    - Type curves for coefficients: Stallman, R. W. 0995
  - Small drainage basins*
    - Theoretical analysis: Toth, J. 1333
  - Specific capacity of wells*
    - Estimating: Turcan, A. N., Jr. 1062
  - Stream connected aquifer*
    - Effect of surface flood wave: Cooper, H. H., Jr. 0404
  - Theis' formula*
    - Pumping from unconfined aquifer: Youngs, E. G. 1228

**Ground-water hydraulics***Theory*

Book review: Smith, W. O. 0861

Russian contributions: DeWiest, R. J. M.  
0175*Tracers*Effect of injection scheme on spread: Ogata,  
Akio. 0570*Transmissibility determination*

Inhomogeneous aquifer: Stallman, R. W. 0996

*Transmissibility estimation*

Specific capacity of wells: Theis, C. V. 0980

*Unconsolidated sands*

Hydraulic conductivity: Behnke, J. J. 0105

*Unsteady flow*Symposium proceedings: Maasland, D. E. L.  
1356*Water-table conditions*Scaling relations for models: Scheidegger, A.  
E. 0911*Wedge-shaped aquifer*T/S calculation, type curves: Papadopoulos, I.  
S. 0587**Ground-water techniques***Aerial observations*Locating ground-water inflow to streams:  
Wiitala, S. W. 1191*Age and movement*

Use of carbon isotopes: Vogel, J. C. 0959

*Age determination methods*

Carbon-14 and tritium: Münnich, K. O. 0973

*Analog model studies*Data requirements: vanEverdingen, R. O.  
1108*Analog models*Design criteria and errors: Stallman, R. W.  
0874*Analog plotter*Predicting water-level changes from canal  
recharge, Florida: Sherwood, C. B. 0888*Applied aquifer test data*Water supply, Wichita, Kansas: Stramel, G.  
J. 1013*Aquifer characteristics*Correlation of lithologic and fluid properties:  
Johnson, C. R. 0337*Aquifer tests*Procedure outline and discussion: Jones, J. F.  
0346Shortcuts and special problems: Bentall, Ray.  
0112*Aquifer-test data*Graphic method for plotting: LaRocque, G.  
A., Jr. 0298*Artesian aquifer, leaky*

Radial flow curves: Cooper, H. H., Jr. 0403

*Baseflow recession analysis*Ground-water discharge: Knisel, W. G., Jr.  
1424*Capillary pressure measurement*

Vapor pressure method: Saito, Hikaru. 1296

**Ground-water techniques***Centrifuge*Time-drainage relations, natural sand: Prill,  
R. C. 0955*Chemical methods*

Summary of methods: Brown, I. C. 1375

*Coefficient of storage*Determination without extrapolation:  
Lohman, S. W. 0502*Computing coefficients of transmissibility*

Composite type curve: Walton, W. C. 1149

*Determination of aquifer boundary*

Use of Locus circles: Moulder, E. A. 0425

*Determination of stream diversion*

Chart: Theis, C. V. 0975

*Determination of well spacing*

Thick, extensile aquifer: Theis, C. V. 1406

*Development in alluvial deposits*

Connecticut, New Haven: Novarro, J. A. 0565

*Double tracers for ground-water flow*Chromium-51-EDTA and tritium: Knutsson,  
G. 1413*Drawdown calculation*

Use of slide rule: Theis, C. V. 0977

Vicinity of discharging well: Theis, C. V. 0978

*Drawdown corrections*

Partially tapped aquifer: Jacob, C. E. 0324

*Drawdown, equilibrium conditions*Aquifer bounded by straight-line source:  
Theis, C. V. 0976*Drawdown estimation*

Cyclic discharge: Brown, R. H. 0282

Cyclic rates of discharge: Theis, C. V. 1489

*Drawdown graphs*

Simplified: May, H. G. 0540

*Drawdown patterns*Straight-line-boundary aquifers: Lang, S. M.  
0292*Drift-filled valleys*Location by gravity meter survey: McGinnis,  
L. D. 0443*Electric analog*

Unconfined aquifers: Stallman, R. W. 0873

*Electrical resistivity and conductivity*

Saline-water movement: Ineson, J. 0687

*Engineering geology applications*

Examples and discussion of methods:

Crosthwaite, E. G. 1328

*Estimation of stratification*

Radioactive tracers: Iwai, S. 0972

*Faulted areas*

Study methods: Dutcher, L. C. 0199

*Filtration velocity measurement*

Radioisotope tracers: Moser, H. 0958

*Flow system analysis*

Radioactive tracers: Nelson, R. W. 1419

*Flow timing with tracers*Affected by hydrologic phenomena: Theis, C.  
V. 1420*Flow-diagrams*Distortion in sections with exaggerated  
vertical scale: vanEverdingen, R. O. 1098*Fractured rock areas*

California, northern: Burnett, J. L. 1339

- Ground-water techniques**
- Geophysical exploration*
    - Canada, Alberta: Lennox, D. H. 0485
    - Summary of methods: Breusse, J. J. 0272
    - United States, southwestern: Heinricks, W. E., Jr. 0832
  - Geophysical methods*
    - Aquifer location in Canadian prairies: Lennox, D. H. 1380
    - Buried valleys, location: Sendlein, L. V. A. 0885
    - Small water wells: Linck, C. J. 0495
  - Ground-water data*
    - Collecting and interpreting: Bentall, Ray. 0111
  - Head measurement*
    - Multiaquifer wells: Brown, D. J. 0926
  - Heavily pumped areas*
    - Special scales for predicting drawdown: Conover, C. S. 0398
  - Induced recharge*
    - Canada, Alberta: Meyboom, P. 0643
  - Infiltration, acidic hot spring water*
    - Radioisotope tracers: Ariizumi, A. 1411
  - Infiltration measurement*
    - Field method: Johnson, A. I. 0334
  - Isotope methods*
    - Research: Harpaz, Y. 1418
  - Linear fluid barrier detection*
    - Well pressure measurements: Davis, E. G., Jr. 0164
  - Low velocity flow measurement*
    - Water flow in clays: Ping, Li Seung. 0612
  - Mathematical models*
    - Aquifer tests: Meneley, W. A. 0658
  - Measurement, upward flow*
    - Water table to soil surface: Doering, E. J. 0182
  - Micrometeorite measurements*
    - Water-level fluctuations: Walton, W. C. 1135
  - Model studies*
    - Flow in steep tile drains: Lembke, W. D. 0484
    - Flow line observation: Lehr, J. H. 0482
    - Flow lines toward stream: Lehr, J. H. 0481
    - Method for assessing reservoir characteristics: Johnson, C. R. 0337
    - Permeability, graphical multiple-regression analysis: Jenkins, C. T. 0327
    - Pumping effects: Lehr, J. H. 1428
    - Water table between ditches: Ligon, J. T. 0494
  - Model studies, laboratory*
    - Saline-water intrusion: Rumer, R. R., Jr. 0899
  - Model studies, mathematical*
    - Aquifer recharge: Trelease, F. J. 0925
    - Induced recharge: DeWiest, R. J. M. 0176
  - Multiaquifer wells*
    - Measurement of head distribution: Brown, D. J. 0926
  - Neutron moisture probe*
    - Storage coefficient determination: Meyer, W. R. 0655
  - Partially penetrating well*
    - Drawdown corrections: Jacob, C. E. 0324
- Ground-water techniques**
- Permeability determination*
    - Bibliography: Richter, R. C. 0723
    - Water-table aquifers: Jacob, C. E. 0322
  - Permeability estimation*
    - Graphical multiple-regression: Jenkins, C. T. 0327
  - Porous media hydraulics*
    - Steady-state fingering, unique solutions to equations: Outmans, H. D. 0580
  - Power auger*
    - Ground-water exploration: Bailey, N. G. 0086
  - Radioisotope tracing*
    - Hydraulics, underground pool in a karst region: Smith, D. B. 1415
  - Reverse water-level fluctuations*
    - Causes: Andreassen, G. E. 0044
  - Sand-dune areas*
    - Water extraction methods: Brown, S. G. 0002
  - Single-boundary aquifers*
    - Type curves for coefficients: Stallman, R. W. 0995
  - Specific capacity, estimating*
    - Turcan, A. N., Jr. 1062
  - Specific yield, estimation*
    - Alluvium, unconsolidated: Preuss, F. A. 0953
    - Column drainage and centrifuge moisture content: Johnson, A. I. 0335
  - Specific yield, prediction*
    - Subsoil cores: Perrier, E. R. 0604
  - Specific-capacity data analysis*
    - Dolomite aquifers: Walton, W. C. 1136
  - Statistical analysis, observation wells*
    - Ohio: Klein, Marian. 0378
  - Television*
    - Callahan, J. T. 0031
  - Well inspection*
    - Gorder, Z. A. 0786
  - Theis nonequilibrium formula*
    - Graphic shortcuts: Warren, M. A. 1496
  - Tile drain system*
    - Design equations: van Schilfgaarde, Jan. 0675
  - Tracer injection*
    - Elliptic and point sources: Ogata, Akio. 0570
  - Transmissibility determination*
    - Cyclic water-level fluctuations: Ferris, J. G. 0638
    - Inhomogeneous aquifer: Stallman, R. W. 0996
    - Residual drawdown in bailed well: Skibitzke, H. E. 0849
    - Slug-injection test: Ferris, J. G. 0639
    - Theis recovery method, Jacob modification: Jacob, C. E. 0323
  - Transmissibility estimation*
    - Specific capacity of wells: Theis, C. V. 0980
  - Transmissibility mapping*
    - Alluvium, lower Arkansas River valley: Bedinger, M. S. 1426
  - T/S calculation, type curves*
    - Wedge-shaped aquifer: Papadopoulos, I. S. 0587
  - Velocity computation*
    - Temperature distributions: Stallman, R. W. 0875
  - Water flow through clay*
    - Measuring low velocity: Ping, Li Seung. 0612

- Ground-water techniques**
- Water-level fluctuations*
    - Micrometeorite measurements: Walton, W. C. 1135
  - Water-level measurement*
    - Description of various methods: Jones, J. F. 0346
  - Well logging*
    - Collection and examination of drill cuttings: Stevens, P. R. 1002
    - Electrical and radioactive: Patten, E. P., Jr. 0591
  - Well renewing*
    - Television inspection: Gorder, Z. A. 0786
- Ground-water—surface-water relations**
- Acidic hot spring water infiltration*
    - Movement traced with radioisotopes: Ariizumi, A. 1411
  - Artesian aquifer recharge*
    - Seepage and infiltration: Thomas, H. E. 1506
  - Artificial recharge pit geometry*
    - Effect on ground-water flow: Dvoracek, M. J. 0202
  - Bank storage*
    - Flood stages: Cooper, H. H., Jr. 0513
    - Measurement by water-quality changes: Bliss, J. H. 0679
  - Decreased runoff*
    - Depletion of ground-water storage: Hirashima, G. T. 0934
  - Evapotranspiration effects*
    - Oklahoma: Clark, W. E. 0261
  - Flood waves*
    - Bank storage effects on ground water movement: Cooper, H. H., Jr. 0404
  - Ground-water discharge*
    - Location by aerial observation: Wiitala, S. W. 1191
  - Ground-water flow toward stream*
    - Model study: Lehr, J. H. 0481
  - Riverbed recharge*
    - Quaternary alluvium: Wilmoth, B. M. 1197
  - Saline ground water, shallow, in glacial till*
    - Irrigation, salt accumulation: vonSchaik, J. C. 1442
  - Shallow aquifers*
    - Line-source recharge: DeWiest, R. J. M. 0176
  - Streambed percolation*
    - Development for water supply: Rorabaugh, M. I. 0736
  - Tile drainage system*
    - Design equations: vanSchilfgaarde, Jan. 0675
  - Water management*
    - Conjunctive operation of dams and aquifers: Buras, Nathan. 0010
  - Water movement*
    - Radioisotope tracers: Nelson, R. W. 1419
  - Water resources systems*
    - Administration: Bower, B. T. 0263
- Gulf of Mexico river basins, western**
- Surface-water quality*
    - Data: U.S. Geological Survey. 1046
- Hawaii**
- Hamakua-Kohala*
    - Water supply study: Hawaii Div. of Water and Land Devel. 0825
  - Irrigation*
    - Upper Hamakua Ditch: Hawaii Div. of Water and Land Devel. 0826
  - Kahola Mountain and Mauna Kea*
    - Water resources: Davis, D. A. 0162
  - Molokai Island*
    - Ground-water storage and depletion: Hirashima, G. T. 0945
  - Oahu, Haiku-Kahaluu area*
    - Influence of water-development tunnels: Hirashima, G. T. 0934
  - Oahu Island*
    - Hydrology and water resources: Mink, J. F. 0671
  - Oahu, Waianae area*
    - Ground water: Zones, C. P. 1232
  - Water distribution*
    - Upper Hamakua Ditch: Hawaii Div. of Water and Land Devel. 0826
  - Water law*
    - Hamakua-Kohala water study: Hawaii Div. of Water and Land Devel. 0827
- Humboldt River, Nevada**
- Winemucca area*
    - Water resources: Cohen, Philip. 1346
- Hydraulic conductivity**
- Soil cores*
    - Strain gage pressure cell method: Bianchi, W. C. 0121
  - Unconsolidated sands*
    - Uniform, stratified, and mixed: Behnke, J. J. 0105
- Hydraulics**
- Alluvial channels*
    - Analysis of relief bridge scour: Laursen, E. M. 0303
  - Channel geometry*
    - Shallow estuarine: Langbein, W. B. 0294
  - Clay-water suspensions*
    - Flow regime: Howard, C. D. D. 0695
  - Conductivity*
    - Measurement: Johnson, W. R. 0343
  - Coupled parallel channels*
    - Computer and experimental results: Thorne, J. F. 1051
  - Culvert and bridge design*
    - Computations: Jarocki, Walenty. 0326
  - Equations of motion*
    - Channel flow around objects: Whitaker, S. 1141
  - Flood routing*
    - Reexamination of equations of motion: Henderson, F. M. 1498
  - Flow at low Reynolds numbers*
    - Equations of motion: Whitaker, S. 1141
  - Flow in concrete pipe*
    - Swanson, H. V. 1016
  - Flow predictability*
    - Lorenz, E. N. 0506
  - Flume studies*
    - Roughness: Mirajgaoker, A. G. 0645
  - Gas flow in porous media*
    - Laboratory test method: Miller, J. S. 0644

**Hydraulics***Ground water*

Analog models: Lehr, J. H. 0483

*Handbook*

Hydrostatic and fluid-flow problems: King, H. W. 0369

*Hydraulic engineering*

Handbook: Rich, G. R. 0722

*Hydrodynamics of a Coulomb System*

Statistical derivation: Kaufman, A. N. 0358

*Laminar flow*

Stability: Yih, Chia-Shun. 1223

*Model studies*

Flow in steep tile drains: Lembke, W. D. 0484

*Open channels*

Wave travel time in backwaters: Simon, A. L. 0893

*Pipe flow*

Effects of surface roughness: Logan, Earl, Jr. 0501

*Porous medium*

Steady-state fingering, unique solutions to equations: Outmans, H. D. 0580

*Problem solving*

Simple method of dimensional analysis: Whittington, R. B. 1189

*Research*

U.S. Bureau Reclamation: U.S. Bureau of Reclamation. 1078

*Research in U.S.*

1963: Middleton, H. K. 0662

*Stokes' flow of a sphere*

Solution: Dupont, K. C. 0194

*Stream channels*

Roughness effects: Mirajgaoker, A. G. 0645

*Turbulence*

Flow with suspended particles: Hino, Mikio. 1436

*Turbulent channel flow*

Wall region: Tien, C. L. 1053

*Turbulent flow*

Plane curved channels, finite depth: Brown, O. G. 0279

*Two-phase flow through porous media*

Evaluation of scale-up laws: Nielsen, R. L. 0476

*Two-phase radial flow*

Analysis of pressure transients: Martin, J. C. 0528

*Uniform flow in open channels*

Solving the equations: Pickard, W. F. 1497

*Upstream velocity distribution*

Effects on discharge coefficient: Ferron, A. G. 0637

*Water supply*

Textbook: Twort, A. C. 1064

*Wave phenomena*

Turbulence: Collins, J. I. 0397

**Hydrologic data***Agricultural watersheds, experimental*

United States, 1956-59: Hobbs, H. W. 0947

*Analysis*

Arizona, San Simon Basin: White, N. D. 1187

*Annual runoff means, reliability*

Length of record: Hidore, J. J. 0993

**Hydrologic data***Aquifer tests*

Analyzing with composite type curve: Walton, W. C. 1149

*Automatic processing*

Watershed research: Kelly, L. L. 0678

*Automatic processing, digital computer*

Streamflow records: Kennedy, E. J. 0681

*Average climatic water balance*

Asia: Mather, J. R. 1486

U.S.S.R.: Mather, J. R. 1425

*Benchmark stations*

Needs and uses of data, USGS program: Wilson, H. D., Jr. 1198

*Collection program, implementation report*

Pacific Northwest: Columbia Basin Inter-Agency Comm. 1501

*Drainage areas*

Texas streams, San Antonio River basin: U.S. Geological Survey. 1093

Texas streams, Trinity River basin: U.S. Geological Survey. 1094

*Estuarine meanders*

Sites, global: Ahnert, Frank. 0058

*Geochemistry*

Chemical analyses, subsurface waters: White, D. E. 1401

*Ground water*

Requirements for analog model studies: vanEverdingen, R. O. 1108

*Ground-water levels, Ohio*

Statistical analysis: Klein, Marian. 0378

*Ground-water quality*

Illinois: Larsen, T. E. 0300

*Hydrology, international*

Outline of programs: National Research Council. 0459

*New Mexico streams*

To water year 1959: Reiland, L. J. 0927

*Organization of data*

Feasibility study, for OCD use: Smith, D. D. 0855

*Rainfall*

Runoff estimation, small rural watersheds: Witherspoon, D. F. 1203

*Statistical analyses*

Streamflow, quality and quantity correlation: Ward, J. C. 1150

*Streamflow records automation*

Pilot computer program: Carter, R. W. 0248

*Surface water*

Distribution of existing networks: Giusti, E. V. 0780

*Telemetering systems*

U.S. Army Corps of Engineers: Hanes, Frank. 1245

*West Virginia*

Water quality network: West Virginia Div. Water Resources. 1184

**Hydrologic equipment and instrumentation***Critical depth flume, theory and equations*

Temporary flow measurements, sewers and drains: Diskin, M. H. 0181

*Current meter measurements*

Accuracy: Carter, R. W. 1500

**Hydrologic equipment and instrumentation***Electronic monitor system*

River-quality surveillance: Cleary, E. J. 0228

*Evapotranspiration*

Soil samplers: Vasa, Jiri. 1114

*Evapotranspirometers*

Evaluation of accuracy and validity: Ward, R. C. 0688

*Gamma-ray density meter*

Bed scour measurement: Ariizumi, Akira 0963

*Infiltrometer*

Simulating rainfall: McQueen, I. S. 0451

*Infiltrometer, buffered cylinder*

Errors from unequal water levels: Bouwer, Herman. 0139

*Lysimeters*

Portable: Libby, F. J. 0492

*Open-channel flow, direct measurement of shear*

Floating-plate and knife-edge beam-balance: Davidian, Jacob. 0160

*Photometric*

Semi-automatic determination for hardness: Lacy, J. 0396

*Pressure-differential meter*

Discharge coefficient: Ferron, A. G. 0637

*Rain gauges*

Accuracy: Musgrove, R. H. 0435

Comparison of five installations: Allis, J. A. 0061

*Runoff, rainfall measurement*

Small drainage areas: Knapp, J. W. 0381

*Sedimentation*

Analysis of fluvial discharge: U.S. Inter-Agency Comm. 1423

*Seepage meter*

Recharge studies: Bouwer, Herman. 0262

*Snow samplers*

Comparison of 3 types: Beaumont, R. T. 0103

*Spectral analysis*

Stream and estuary field studies: Wastler, T. A. 1156

*Staff gage system*

Reservoirs: Neuberger, J. W. 0464

*Stream-gaging networks*

Assessing existing programs: Giusti, E. V. 0780

*Surface water instruments*

New types available: Barron, E. G. 1326

*Telemetering systems*

Radioisotope snow gage: Duncan, D. L. 1244

U.S. Army Corps of Engineers: Hanes, Frank. 1245

*Television*

Ground-water exploration: Callahan, J. T. 0031

Well inspection: Gorder, Z. A. 0786

*Viscosity measurement*

Laboratory handbook: VanWazer, J. R. 1113

*Water budget records*

Glacier basin: Tangborn, W. V. 1023

*Water quality*

Monitoring in reservoirs: Weiss, C. M. 1178

*Water vapour transport, vertical*

Windspeed and humidity: Keijman, J. Q. 0360

**Hydrologic equipment and instrumentation***Water-level recorders*

Modified to make microtime measurements: Walton, W. C. 1135

*Water-stage recorder*

Digital type: Isherwood, W. L. 0318

*Water-stage recorders*

Improved systems: Koopman, F. C. 1343

*Water-temperature studies*

Moore, A. M. 1365

**Hydrologic techniques***Aerial observation*

Locating ground-water inflow to streams: Wiitala, S. W. 1191

*Analog computers*

Ground-water hydrology studies: Skibitzke, H. E. 0851

*Analog models*

Types and use: Walton, W. C. 1137

*Chemistry*

Acid-base equilibria: Weber, W. J., Jr. 1173

*Delaware River model*

Tidal motion, diffusion data: O'Connor, D. J. 0567

*Effects of climate vs. man*

Hydrologic bench marks: Wilson, H. D., Jr. 1198

*Estimating mean precipitation*

Accuracy: McGuinness, J. L. 0446

*Evaluation, rational runoff coefficients*

Small agricultural watersheds: Horn, D. L. 0693

*Extending records*

Streamflow, statistical methods: Fiering, M. B. 0750

Use of closed-basin lake levels:

Gschwendtner, J. V. G. 0744

*Flume studies*

Spiral flow, channel deposits: Tanner, W. F. 1024

*Ground-water flow diagrams*

Distortion with exaggerated vertical scale: vanEverdingen, R. O. 1098

*Hydraulic problem solving*

Simple dimensional method: Whittington, R. B. 1189

*Hydrologic cycle concept*

Parizek, R. R. 0588

*Model analysis*

Pumping effects: Lehr, J. H. 1428

*Model studies*

Scaling relationships: Scheidegger, A. E. 0911

Soil-moisture flow: Hanks, R. J. 0805

*Models*

Mathematical: Amorocho, J. 0055

*Multivariate statistical model*

Prediction of mean annual flood: Wong, S. T. 1207

*Numerical models*

Atmospheric boundary layer: Estoque, M. A. 0224

*Porosity measurement*

Air displacement: Fleming, J. D. 0754

*Quantitative geomorphic analysis*

Runoff variations in arid regions: Farvolden, R. N. 0686

- Hydrologic techniques**
- Reservoirs and dams*
    - Engineering methods and materials: U.S. Bureau of Reclamation. 1078
  - River basin study*
    - Effects of hydraulic and geologic factors on streamflow: Kinnison, H. B. 0373
  - Runoff estimation*
    - Small watersheds, models: Witherspoon, D. F. 1203
  - Runoff forecasting*
    - Short-cut methods: McCutchan, A. I. 0646
  - Runoff precipitation relations*
    - Significance of radiostrontium fallout: Yamagata, N. 1412
  - Sedimentation*
    - Measurement and analysis of sediment loads in streams: U.S. Inter-Agency Comm. 1422
  - Soil moisture measurement*
    - Neutron method: vanBavel, C. H. M. 1147
    - Research, review 1960-1963: vanBavel, C. H. M. 1105
  - Statistical analysis*
    - Specific capacities in dolomite aquifers: Walton, W. C. 1136
  - Statistical methods*
    - Autocorrelation of rainfall and streamflow: Matalas, N. C. 0534
    - Streamflow, record extension: Fiering, M. B. 0750
  - Statistical studies*
    - Logarithmic-normal frequency: Neff, E. L. 0462
  - Streamflow hydrograph model*
    - Effects of cloud seeding: Crawford, N. H. 0145
  - Water supply*
    - United States experience applicable to developing countries: Wolman, Abel. 1148
  - Water supply engineering*
    - Textbook: Twort, A. C. 1064
- Hydrology**
- Atmosphere-oceans interaction*: National Academy of Sciences. 0458
  - Bibliography*
    - Canada, 1959-1961: Canada National Research Council. 1493
  - Canada*
    - Activities, 1963: Canada National Research Council. 0033
  - Climate changes*: U.N. Educ. Sci. Cultural Org. 1345
  - Educational material*
    - Development of science: Jones, P. B. 0348
  - Effects of climate*
    - Measured by hydrologic bench marks: Wilson, H. D., Jr. 1198
  - Fracture zones*
    - Ground-water underflow: Dutcher, L. C. 0199
  - Geohydrologic concepts*
    - Applications in geology: Maxey, G. B. 0539
  - Hydrologic cycle concept*: Parizek, R. R. 0588
- Hydrology**
- Information retrieval*
    - Water supply and pollution control: Faber, H. A. 0626
  - International cooperation*
    - Research: Nace, R. L. 0455
  - Long-term research program*
    - International Hydrological Decade: U.N. Educ. Sci. Cultural Org. 1066
  - Nuclear underground explosion sites*
    - Tritium contamination: Stead, F. W. 0997
  - Persian Gulf*
    - Circulation and salinity: Sugden, W. 0991
  - Radioisotopes*
    - Application of, proceedings of a symposium: International Atomic Energy Agency. 0970
  - Research*
    - Federal activities: Federal Council, Sci. and Technology. 1446
    - International programs: National Research Council. 0459
  - Research, United States*
    - Water resources use, control, and planning: Wolman, Abel. 1205
  - Small drainage basins*
    - Theory: Toth, J. 1333
  - Terminology*
    - Definitions: Meneley, W. A. 0648
  - Training*
    - Soil water movement and storage: Hobbs, J. A. 0935
  - Training program*
    - Interdisciplinary: Harshbarger, J. W. 0820
  - Universities Council on*: Hall, W. A. 1285
  - Water supply*
    - Textbook: Twort, A. C. 1064
  - Watersheds*
    - Effects of grazing: Lusby, G. C. 0508
- Ice**
- Aerial observation*
    - Location of ground-water inflow to streams: Wiitala, S. W. 1191
  - Antarctic, shelves*
    - Bottom melting: Shumskiy, P. A. 0890
  - Bibliography*: U.S. Army, CRREL. 1069
  - Flow law*
    - Measurements on Athabasca glacier: Paterson, W. S. B. 0590
  - Formation prediction*
    - Heat loss calculation: Williams, G. P. 1196
  - Greenland*
    - Extra-terrestrial dust sampling: Langway, C. C., Jr. 0297
  - Properties*
    - Mechanical, engineering: Kingery, W. D. 0371
  - Ross Shelf, Antarctica*
    - Inner structure and crystallography: Gow, A. J. 0788
  - Sheets fringed by mountain ranges*
    - Heat balance: Weertman, J. 1174
  - Sheets, motion*
    - Flow line calculation: Haefeli, R. 0797
  - Temperature*
    - Englacial: Muller, Fritz. 0432
    - Heat flux, glacial: Orveg, Svenn. 0576

- Idaho**
- Fort Hall Indian Reservation*
    - Ground water: West, S. W. 1182
  - Little Lost River basin*
    - Hydrology: Mundorff, M. J. 0433
  - Raft River basin*
    - Ground water and irrigation: Mundorff, M. J. 0434
  - Southeastern*
    - Stock-water development: Hadley, R. F. 0796
  - Teton Basin Project, Lower Teton Division*
    - Reevaluation statement, U.S. Bureau of Reclamation: U.S. Bureau of Reclamation. 1081
  - Water-supply management*
    - Quality-control program: Towne, W. W. 1265
- Illinois**
- Argonne National Laboratory*
    - Ground water: Knowles, D. B. 0383
  - Arlington Heights quadrangle*
    - Flood map: Ellis, D. W. 0210
  - Aurora North quadrangle*
    - Flood map: Ellis, D. W. 0215
  - Climatology*
    - Cooperative project, 4th progress report: Changnon, S. A., Jr. 1036
  - Drift-filled bedrock valley*
    - Location by gravity anomaly: McGinnis, L. D. 0443
  - Drought*
    - Climatology: Huff, F. A. 0929
  - Du Page County*
    - Ground water: Walton, W. C. 1136
  - Elmhurst quadrangle*
    - Flood map: Ellis, D. W. 0211
  - Embarrass River*
    - Flood control, drainage development: Illinois Division of Waterways. 1447
  - Ground-water levels*
    - Through 1961: Russell, R. R. 0901
  - Highland Park quadrangle*
    - Flood map: Ellis, D. W. 0214
  - Madison County, Wood River*
    - River survey: U.S. Army Corps of Engineers. 1072
  - Northern*
    - Natural occurrence of radium in ground water: Emrich, G. H. 0220
    - Yields of shallow dolomite wells: Csallany, Sandor. 0154
  - Peoria*
    - Artificial recharge, pits: Harmeson, R. H. 0814
  - Southern*
    - Precipitation, dense network for water resources research programs: Changnon, S. A., Jr. 1035
  - Wheeling quadrangle*
    - Flood map: Ellis, D. W. 0213
- India**
- Kandla Port*
    - Water supply: Taylor, G. C., Jr. 1028
- Indiana**
- Lake County*
    - Aquifer recharge rates: Rosenshein, J. S. 0737
  - Miami County, Bunker Hill Air Force Base*
    - Ground water: Watkins, F. A., Jr. 1157
  - Owen County*
    - Ground water: Watkins, F. A., Jr. 1159
  - Small watersheds*
    - Design hydrographs: Wu, I-Pai. 1214
  - South-central, Upper Patoka drainage basin*
    - Proposed damsite investigation: Gray, H. H. 0790
  - Vigo County*
    - Ground water: Watkins, F. A., Jr. 1495
  - Wabash River*
    - National Water Quality Network station: Stierle, Harry. 1273
  - West Lafayette*
    - Temperature and phosphates as tracers in recharge pits: Sampayo, F. F. 0840
- Infiltration**
- Acid, hot-spring water*
    - Movement traced with radioisotopes: Ariizumi, A. 1411
  - Artificial recharge*
    - Basin design, operation: American Water Works Association. 0073
  - Calculation of hydraulic conductivity*
    - Soil compaction measurement: Schmidt, Roy H. 0915
  - Colloidal suspensions through porous media*
    - Sealing effects: Rausch, D. L. 0709
  - Crystalline rocks, weathered*
    - Georgia: Stewart, J. W. 1008
  - Decrease*
    - Rangeland grazing: Rich, L. R. 0721
  - Effects of mulch*
    - Experiments with different rates of mulch: Mannerling, J. V. 0521
  - Experiments*
    - High school students: Harrold, L. L. 0818
  - Induced*
    - Meander terrace deposit: Meyboom, P. 0643
  - Irrigation furrows*
    - Quantity and rate: Cahoon, G. A. 0018
  - Measurement*
    - Equipment and theory: Bouwer, Herman. 0262
    - Errors with buffered cylinder infiltrometer: Bouwer, Herman. 0139
    - Field method: Johnson, A. I. 0334
    - Rainfall-simulating infiltrometer: McQueen, I. S. 0451
  - Rangeland*
    - Effects of grazing: Rauzi, Frank. 0711
    - Related to grazing and fertilization: Rauzi, Frank. 0710
  - Rate*
    - Diffusivity-water content relation: Hanks, R. J. 0804
  - Seasonal variation on hillslopes*
    - Colorado, western: Schumm, S. A. 0921

- Infiltration**
- Soil-water relations*
  - Theory: Rubin, J. 0897
- Inter-Agency Sedimentation Project**
- Summary of work, Jan.-Feb. 1963*
  - Measurement and analysis of sediment loads in streams: U.S. Inter-Agency Comm. 1423
- International Hydrological Decade**
- Hydrology research*
  - Long-term program: U.N. Educ. Sci. Cultural Org. 1066
- Iowa**
- Cedar River basin*
  - Floods: Schwob, H. H. 0878
  - Des Moines area*
  - Flood map: Myers, R. E. 0437
  - Little Sioux River Valley*
  - Alluvial morphology: Pedersen, D. E. 0598
  - Surface water records*
  - 1955-1960: Meyers, R. E. 0657
- Irrigation**
- Canals*
  - Measurement, seepage meter: Bouwer, Herman. 0262
  - Columbia Basin Project, Washington*
  - Merits of program: Mancinko, George. 0519
  - Consumptive use*
  - Determination: Blaney, H. F. 0131
  - Estimation from solar radiation: Jensen, M. E. 0683
  - Evapotranspiration and deep percolation: Willardson, L. S. 0680
  - Effect on surface-water quality*
  - Bibliography: U.S. Public Health Service. 1100
  - Effect on water quality*
  - California, Sacramento River basin: Brennan, Robert. 0271
  - Furrow*
  - Water distribution, subsurface: Smerdon, E. T. 0936
  - Ground-water movement*
  - Aquifer bounded by canals: Brown, R. H. 1451
  - Infiltration*
  - Quantity and rate: Cahoon, G. A. 0018
  - Irrigated acreage*
  - United States, 1962: Irrigation Engineering and Maintenance. 0316
  - Kansas*
  - Water quality charts: Jacobs, H. S. 0325
  - Lake water*
  - Water quality: Wilcox, J. C. 1507
  - Law design*
  - Preferential water use: Jones, D. S., Jr. 0345
  - Mekong River, southeast Asia*
  - International cooperative water management: White, G. F. 1145
  - Nevada*
  - Humboldt River Basin: Nevada Dept. Conserv. Nat. Resources. 0466
  - Humboldt River Basin: Nevada Dept. Conserv. Nat. Resources. 0467
  - Humboldt River Basin: Nevada Dept. Conserv. Nat. Resources. 0468
  - Irrigation**
  - Nevada*
  - Humboldt River Basin: Nevada Dept. Conserv. Nat. Resources. 0469
  - Practice*
  - Unique consumptive use curve: Hansen, V. E. 1408
  - Projects*
  - Upper Colorado River Commission report: Upper Colorado River Commission. 1103
  - Reclamation*
  - River Basin Planning Act, 1964: U.S. Congress. Senate. 1084
  - Return flow*
  - Quality and significance: Sylvester, R. O. 0677
  - Return flow effects*
  - Reservoir water quality: Bliss, J. H. 0679
  - Saline water*
  - Effect on soil chemistry: Batchelder, A. R. 0100
  - General principles: Kelley, W. P. 0361
  - Saltinity conditions*
  - Salt balance and leaching requirement: Wilcox, L. V. 1194
  - Salt accumulation*
  - Hydrology: Sadler, L. D. M. 1382
  - Saline ground water in glacial till soil: vonSchaik, J. C. 1442
  - Scheduling*
  - Use of can and pan evaporation measurements: Davis, J. R. 0169
  - Supply shortage*
  - Analysis: Thompson, C. B. 0682
  - Surface-water quality for 1959*
  - Western United States: U.S. Geological Survey. 1091
  - Trends, Pacific Northwest*: Swarner, L. R. 1017
  - Use of stored stream runoff*
  - Economics: Moore, C. V. 0415
  - Waste flow*
  - Channel erosion: Miller, C. R. 0663
  - Water conservation research*
  - Nevada: Myers, V. L. 1330
  - Water distribution*
  - Depth of water and furrow length for efficiency: Smerdon, E. T. 0936
  - Water engineering*: Robinson, A. R. 0933
  - Water management*: Quakenbush, T. H. 0702
  - Water quality*
  - California, 1960-61: California Dept. of Water Resources. 0026
  - Standards and problems: Lunt, O. R. 1299
  - Water use, 1956-60*
  - Idaho, south-central Raft River basin: Mundorff, M. J. 0434
  - Survey, state by state: Irrigation Engineering and Maintenance. 0315
  - Water use, Alberta, Canada*
  - Variables: Hobbs, E. H. 0946
  - Water utilization problems*
  - Need for education: Revelle, Roger. 0720
  - Island hydrology*
  - Saline-water intrusion*
  - New York, Long Island, Centre Island: Isbister, John. 0317

**Island hydrology***Water resources development*

Hawaii, Oahu Island: Mink, J. F. 0671

**Kansas***Cimarron River*

Flood-plain changes: Schumm, S. A. 0922

*Ground-water levels*

1962: Broeker, M. E. 0276

*Irrigation*

Water quality charts: Jacobs, H. S. 0325

*Pollution*

Agricultural: McVicker, D. S. 0453

Causes, conference: Kansas Academy of Science. 0353

Industrial wastes and pesticides: Neel, J. K. 0461

Petroleum industry: Latta, B. F. 0301

*Wallace County*

Ground water: Hodson, W. G. 0949

*Water conservation*

Evaporation control: Olson, R. V. 1431

*Water quality management*: Metzler, D. F. 0654*Wichita*

Water supply: Lawrence, R. E. 0305

*Wichita area*

Flood map: Ellis, D. W. 0212

**Kentucky***Allen County, Scottsville area*

Ground water: Hopkins, W. B. 0691

*Beaver Creek basin*

Hydrology, strip mining area: Musser, J. L. 0436

*Central*

Ground-water availability map: Brown, R. F. 0281

Ground-water availability map: Lambert, T. W. 0285

*Eastern*

Water resources: Kirkpatrick, G. A. 0374

*Green and Taylor Counties*

Ground-water contamination, oil-field brines: Hopkins, H. T. 0690

*Louisville area*

Ground water: Bell, E. A. 0106

*Mississippian Plateau region*

Ground water: Brown, R. F. 0280

*Ohio River valley*

Alluvial-deposit hydrology, South Portsmouth to Manchester Islands: Price, W. E., Jr. 1407

*Ohio River valley, Hawesville, Cloverport areas*

Alluvial-deposit hydrology: Gallaher, J. T. 0745

*Ohio River valley, Lewisport, Owensboro area*

Alluvial deposit hydrology: Gallaher, J. T. 0766

*Ohio River valley, Spottsville, Reed areas*

Alluvial-deposit hydrology: Gallaher, J. T. 0741

*Southwestern*

Ground-water availability map: Lambert, T. W. 0286

**Lakes***Alaska*

Waterpower investigations: Johnson, Arthur. 0333

*British Columbia*

Water quality for irrigation: Wilcox, J. C. 1507

*Chemical characteristics*: Hayes, F. R. 1235*Chemical composition*

Data compilation: Livingstone, D. A. 0497

*Depth measurement*

Aerial photogrammetry: Moessner, K. E. 0412

Aerial photographs: Tewinkel, G. C. 1032

*Heat loss*

Calculation: Williams, G. P. 1196

*Ice-dammed*

Alaska: Stone, K. H. 1010

*Indiana, northern*

Oxygen production: Eberly, W. R. 1274

*Lake Michigan*

Water quality study: Kehr, W. Q. 1266

*Limnology*

Textbook: Ruttner, Franz. 0902

*Minnesota*

Index and guide: Minnesota Division of Game and Fish. 0674

*Natural regulation*

Great Lakes: Bajorunas, L. 1282

*Sedimentation*

Great Lakes research: Hough, J. L. 1277

*Stratification of water*

Temperature profile: Eklund, Henning. 0209

*Tertiary, western United States*

Artesian water supply: Feth, J. H. 0641

*United States, greater than 10 square miles*

Statistical data and general information: Bue, C. D. 0008

*Water budget*

Florida, Brooklyn Lake: Clark, W. E. 0226

*Water quality*

Bacterial sampling: Noble, R. E. 1429

**Libya***Cyrenacia, Al Marj area*

Ground water: Newport, T. G. 0473

**Limestone hydrology***Carbonate equilibria*

Hydrogen ion buffering: Weber, W. J., Jr. 1173

*Cavern solution*

Configuration of wall retreat: Lange, A. L. 0295

*Dolomite solubility*

Florida: Hsu, K. J. 1044

*Edwards Plateau, Texas*

Ground water: Arnow, Ted. 1341

*Ground-water movement*

Traced with tritium: Burdon, D. J. 1410

*Ground-water occurrence*

Georgia, southwestern: Owen, Vaux, Jr. 0582

*Indiana, south-central*

Upper Patoka drainage basin proposed dams site study: Gray, H. H. 0790

*Land subsidence*

Georgia, Savannah area: Davis, G. H. 1466

- Limestone hydrology**
- Pennsylvania*
    - Lebanon Valley: Meisler, Harold. 0547
  - Shallow dolomite wells*
    - Yield, Illinois: Csallany, Sandor. 0154
  - Specific capacities of wells*
    - Related to geohydrologic conditions: Walton, W. C. 1136
  - Springs*
    - Mesopotamia: Burdon, D. J. 0011
  - Texas, Edwards Plateau*
    - Ground water: Pettitt, B. M., Jr. 0607
  - Underground pool hydraulics*
    - Tracing with radioisotopes: Smith, D. B. 1415
- Limnology**
- Mechanism of manganese solution:* Ingols, R. S. 0311
  - North America*
    - Textbook: Frey, D. G. 0762
  - Oxygen production*
    - Indiana: Eberly, W. R. 1274
  - Physical and chemical factors*
    - Mississippi River: Dorris, T. C. 0186
  - Reservoir characteristics*
    - Control by air injection: Ford, M. E., Jr. 0737
- Louisiana**
- Baton Rouge area*
    - Salt-water encroachment: Morgan, C. O. 0419
  - Chicot aquifer*
    - Hydrology: Whitman, H. M. 1443
  - East Feliciana Parish*
    - Ground water: Morgan, C. O. 0418
  - Lake Charles area*
    - Gas and brackish water contamination: Hodges, A. L., Jr. 1347
  - Livingston Parish*
    - Ground water: Winner, M. D., Jr. 1201
  - Mississippi River Parishes, south of Baton Rouge*
    - Ground-water data: Cardwell, G. T. 0034
  - Natchitoches Parish*
    - Water resources: Newcome, Roy, Jr. 0471
  - Sabine Parish*
    - Water resources: Page, L. V. 0552
  - Southwestern*
    - Ground water: Whitman, H. M. 1443
  - St. Helena Parish*
    - Ground water: Winner, M. D., Jr. 1201
  - St. Tammany Parish*
    - Ground water: Winner, M. D., Jr. 1201
  - Streams*
    - Water-supply characteristics: Page, L. V. 0585
  - Tangipahoa Parish*
    - Ground water: Winner, M. D., Jr. 1201
  - Washington Parish*
    - Ground water: Winner, M. D., Jr. 1201
  - West Feliciana Parish*
    - Ground water: Morgan, C. O. 0418
- Maine**
- Ground water*
    - Reconnaissance: Prescott, G. C., Jr. 0619
  - Southwestern*
    - Ground water in surficial deposits: Prescott, G. C., Jr. 0625
- Maryland**
- Montgomery County*
    - Urban watershed management: Wheeler, G. E., Jr. 1394
  - Montgomery County, upper*
    - Ground water: Johnston, P. M. 0344
- Massachusetts**
- Barnstable County, Cape Cod*
    - Water resources: Sterling, C. I., Jr. 1000
  - Cape Cod*
    - Coastal flooding: Crane, D. A. 1504
  - Cape Cod, Barnstable County*
    - Water resources: Sterling, C. I., Jr. 1000
  - Southeastern*
    - Ground-water data: Maeovsky, Anthony. 0517
- Mekong River**
- Development by international cooperation*
    - Water management and distribution: White, G. F. 1145
- Meteorology**
- Air-sea interaction:* National Academy of Sciences. 0458
  - Planetary air circulation*
    - Weather forecasting: O'Connor, J. F. 0568
- Mexico**
- Necaxa watershed and Upper Lerma River*
    - Evaluation of long-term cloud seeding: Siliceo, E. P. 1004
- Michigan**
- Alger County*
    - Ground water: Vanlier, K. E. 1110
  - Genesee County, Flint area*
    - Water resources: Wiitala, S. W. 1190
  - Gratiot County, Alma area*
    - Ground water: Vanlier, K. E. 1112
  - Great Lakes*
    - Water resources: Marks, W. D. 1503
  - Ground-water conditions*
    - Summary, 1962: Giroux, P. R. 0778
  - Ground-water contamination*
    - Legal controls: Deutsch, Morris. 0174
  - Lakes*
    - Bibliography: Humphrys, C. R. 1324
  - Menominee County*
    - Ground water: Vanlier, K. E. 1111
  - Shiawassee River basin*
    - Water resources: Michigan Water Resources Commission. 1441
  - Surface-water quality*
    - Program and records, 1963: Michigan Water Resources Commission. 1464
- Mining hydrology**
- Acid mine drainage*
    - Research potentialities: Hanna, G. P., Jr. 0806
  - Acid mine water*
    - Stratigraphic relations: Hanna, G. P., Jr. 1271
  - Strip mining*
    - Kentucky, Beaver Creek basin: Musser, J. L. 0436
- Minnesota**
- Elk River nuclear-reactor site*
    - Hydrology: Norvitch, R. F. 0549
  - Ground-water levels, 1957-1961:* Straka, G. C. 1012

**Minnesota**

- Kittson County, Halma-Lake Bronson area*  
Ground water and test pumping: Schiner, G. R. 0914
- Lakes*  
Index and guide: Minnesota Division of Game and Fish. 0674
- Lyon County*  
Ground water: Rodis, H. G. 0733
- Morrison County, Camp Ripley*  
Ground water: Jones, J. R. 0347
- Radioactivity in surface water*  
April-November 1962: Minnesota Department of Health. 0672
- Dec. 1962-June 1963: Minnesota Department of Health. 0673
- Water quality*  
Data compilation, 1955-62: Maderak, M. L. 0516
- Water resources*: Schwartz, G. M. 0876
- Mississippi**
- Adams County*  
Water resources: Callahan, J. A. 0030
- Alcorn County*  
Ground-water study, interim report: Boswell, E. H. 0138
- Aquifer test data*  
Compilation: Harvey, E. J. 0824
- Attala County*  
Water resources: Wasson, B. E. 1143
- Claiborne County*  
Water resources: Callahan, J. A. 0030
- Floods*  
1959: Humphreys, C. P., Jr. 0698
- Rainfall and peak discharge data: Wilson, K. V. 1199
- George County*  
Ground-water data: Harvey, E. J. 0823
- Jackson area*  
Hydrology of the Cockfield Formation: Harvey, E. J. 0822
- Jackson County*  
Ground-water data: Harvey, E. J. 0823
- Water resources investigations, fiscal 1963: Kapustka, S. F. 0354
- Jasper County*  
Ground water: Kern, M. K. 0367
- Jefferson County*  
Water resources: Callahan, J. A. 0030
- Kosciusko*  
Water supply: Wasson, B. E. 1155
- Marshall County, Pigeon Roost Creek watershed*  
Ground water: Asmussen, L. E. 0065
- Northeastern*  
Cretaceous aquifers: Boswell, E. H. 0137
- Observation well records*  
Water levels and artesian pressures: Ellison, B. E., Jr. 0218
- Warren County*  
Water resources: Callahan, J. A. 0030
- Yazoo County*  
Ground water: Callahan, J. A. 0029

**Mississippi embayment**

- Water resources*  
USGS project description: Cushing, E. M. 0157

**Mississippi River**

- Channel migration*  
Sediment composition of bed and banks: Kolb, C. R. 0387

**Middle**

- Physical and chemical limnology: Dorris, T. C. 0186

*Minneapolis, St. Paul vicinity*

- Water-quality surveillance program: Schroeper, G. J. 0920

**Missouri Basin***Water resources engineering*

- U.S. Corps of Engineers: Seedlock, R. F. 0883

**Missouri River***Lower*

- Landforms of flood plain: Schmudde, T. H. 0916

*Montana*

- Development proposals: U.S. Army Corps of Engineers. 1403

*Water supply quality*

- Taste and odor control: Erdei, J. F. 0223

**Montana***Missouri River*

- Development proposals: U.S. Army Corps of Engineers. 1403

*Water resources*

- Summary description: Stermitz, Frank. 1001

**Moon***Ground-water development*

- Use of nuclear explosives: Heckman, R. A. 1449

**Nebraska***Frenchman Creek basin*

- Ground water: Cardwell, W. D. E. 0035

*Ground-water levels*

- 1962: Emery, P. A. 0219

*Republican River*

- Drainage basin landforms analysis:  
Zakrzewska, Barbara. 1229

*Salt Creek basin*

- Sedimentation: Kister, L. R., Jr. 0375

- Water quality: Kister, L. R., Jr. 0375

*Water resources*

- Information booklet: Nebraska Resources Division. 1039

*York County*

- Test hole data: Smith, F. A. 0857

**Nevada***Amargosa Desert*

- Ground water: Walker, G. E. 1127

*Antelope Valley*

- Ground-water reconnaissance: Crosthwaite, E. G. 1427

*Black Rock Desert area*

- Ground-water reconnaissance: Sinclair, W. C. 0845

- Nevada**
- Coal Valley*  
Ground-water reconnaissance: Eakin, T. E. 0204
  - Delamar Valley*  
Ground-water reconnaissance: Eakin, T. E. 0203
  - Dixie-Fairview Valley area*  
Ground water: Cohen, Philip. 0236
  - Dry Lake Valley*  
Ground-water reconnaissance: Eakin, T. E. 0203
  - Duck Lake Valley*  
Ground water: Sinclair, W. C. 1005  
Soils: Sinclair, W. C. 1005
  - Ely Grazing District*  
Stock-water development: Snyder, C. T. 1470
  - Fernley-Wadsworth area*  
Ground water: Sinclair, W. C. 0895
  - Garden Valley*  
Ground-water reconnaissance: Eakin, T. E. 0204
  - Humboldt County*  
Ground-water reconnaissance: Sinclair, W. C. 1434
  - Humboldt County, Kings River Valley*  
Ground water in alluvium: Zones, C. P. 1233
  - Humboldt River*  
Research project progress report: Nevada Dept. Conserv. Nat. Resources. 0465
  - Humboldt River basin, lower*  
Hydrogeology: Bredehoeft, J. D. 0269
  - Humboldt River Basin, Maggie Creek sub-basin*  
Water resources: Nevada Dept. Conserv. Nat. Resources. 0466
  - Humboldt River Basin, Mary's River, sub-basin*  
Water resources: Nevada Dept. Conserv. Nat. Resources. 0468
  - Humboldt River Basin, North Fork sub-basin*  
Water resources: Nevada Dept. Conserv. Nat. Resources. 0467
  - Humboldt River Basin, Ruby Mountains sub-basin*  
Water resources: Nevada Dept. Conserv. Nat. Resources. 0469
  - Humboldt River valley*  
Specific-yield and particle-size relations of alluvium: Cohen, Philip. 0235
  - Humboldt River valley, Winnemucca area*  
Water resources: Cohen, Philip. 1346
  - Irrigation*  
Water conservation research: Myers, V. L. 1330
  - Lake County*  
Ground-water reconnaissance: Rush, F. E. 0900
  - Lander County*  
Ground-water reconnaissance: Crosthwaite, E. G. 1427
  - Las Vegas Valley*  
Effects of drought on water resources: Malmberg, Glenn. 0518
  - Las Vegas Valley, Lake Mead Basin*  
Ground water: Loeltz, O. J. 0498
  - Nevada**
    - Lincoln County, Dry Lake and Delamar Valleys*  
Ground-water reconnaissance: Eakin, T. E. 0203
    - Lincoln County, Garden and Coal Valleys*  
Ground-water reconnaissance: Eakin, T. E. 0204
    - Lincoln County, Lake Valley*  
Ground-water reconnaissance: Rush, F. E. 0900
    - Lincoln County, Pahranagat and Pahroc Valleys*  
Ground-water reconnaissance: Eakin, T. E. 0205
    - Long Valley-Massacre Lake area*  
Ground-water reconnaissance: Sinclair, W. C. 1003
    - Middle Reese River Valley*  
Ground-water reconnaissance: Crosthwaite, E. G. 1427
    - Nye County, Garden and Coal Valleys*  
Ground-water reconnaissance: Eakin, T. E. 0204
    - Nye County, Pahroc Valley*  
Ground-water reconnaissance: Eakin, T. E. 0205
    - Pahranagat Valley*  
Ground-water reconnaissance: Eakin, T. E. 0205
    - Pahroc Valley*  
Ground-water reconnaissance: Eakin, T. E. 0205
    - Pueblo Valley-Continental Lake area*  
Ground-water reconnaissance: Sinclair, W. C. 1434
    - Reports of activities in water resources*  
Federal and State agencies: Nevada Dept. Conserv. 1399
    - Washeoe County, Duck Lake Valley*  
Ground water: Sinclair, W. C. 1005
    - White Pine County, Lake Valley*  
Ground-water reconnaissance: Rush, F. E. 0900

**New England**

    - Prediction of mean annual flood*  
Multivariate statistical model: Wong, S. T. 1207
    - Waste disposal*  
Paper and paperboard mills: Masselli, J. W. 0531
    - Water resources*  
Development: Sterling, C. I., Jr. 1473

**New Hampshire**

    - Nashua-Merrimack area*  
Ground water map: Weigle, J. M. 1177

**New Jersey**

    - Burlington County, Wharton Tract*  
Aquifer test: Lang, S. M. 0293
    - Camden County*  
Ground-water data: Donsky, Ellis. 0185
    - Coastal Plain*  
Chloride concentrations of well water: Seaber, P. R. 0882
    - Gloucester County*  
Public water supplies: Hardt, W. F. 0811

- New Jersey**
- Mercer County*
    - Ground water: Widmer, Kemble. 1140
  - Ocean County, Island Beach State Park*
    - Evaluation of data from deep well: Gill, H. E. 0777
  - Southern*
    - Water-supply characteristics of streams: Hardison, C. H. 0810
  - Surface-water quality*
    - USGS Program of studies: George, J. R. 0774
  - Surface-water records*
    - Oct. 1955-Sept. 1960: McCall, J. E. 0440
  - Water use, industrial*
    - Present and prospective: Grossman, Max. 0792
  - Wharton Tract*
    - Aquifer test: Lang, S. M. 0293
- New Mexico**
- Carlsbad area*
    - Effects of drought on water resources: Bjorklund, L. J. 0126
  - Chaves County*
    - Water resources: Mourant, W. A. 0429
  - Chaves County, Roswell basin*
    - Saline-water encroachment: Hood, J. W. 0689
  - Climatic change indicators*
    - Period, A.D. 1200-1400: Leopold, L. B. 1307
  - Eddy County, Roswell basin*
    - Saline-water encroachment: Hood, J. W. 0689
  - Eddy County, southeastern*
    - Ground water in collapse structures: Cooper, J. B. 0405
  - Elephant Butte Reservoir*
    - Water quality changes: Bliss, J. H. 0679
  - Elephant Butte-Fort Quitman area*
    - Effects of drought on ground-water reservoirs: Conover, C. S. 0399
  - Estancia Valley*
    - Effects of drought on water resources: Smith, R. E. 0858
  - Floods, annual peak*
    - Hydrologic factors: Benson, M. A. 0110
  - Grants-Bluewater area*
    - Effects of drought on water resources: Gordon, E. D. 0787
  - Ground water*
    - Levels, 1963: West, S. W. 1183
  - Ground water*
    - Levels, 1963: West, S. W. 1183
    - Levels, 1962: Ballance, W. C. 0095
  - Lea County*
    - Ground-water conditions: Ash, S. R. 0064
  - Lincoln County*
    - Water resources: Mourant, W. A. 0429
  - Mesilla Valley, lower*
    - Ground-water resource: Leggat, E. R. 0480
  - Middle Rio Grande*
    - Suspended sediment: Nordin, C. F., Jr. 0561
  - Navajo Indian Reservation*
    - Ground-water quality: Kister, L. R. 0376
    - Ground-water supply data: Davis, G. E. 0165
  - Otero County*
    - Water resources: Mourant, W. A. 0429
- New Mexico**
- Pecos River*
    - Causes of depleted ground-water contribution to flow: Thomas, H. E. 1389
  - Rio Hondo drainage basin*
    - Water resources: Mourant, W. A. 0429
  - Rio Puerco near Bernardo*
    - Sediment transport parameters: Nordin, C. F., Jr. 0562
  - Roswell basin, Chaves and Eddy counties*
    - Saline-water intrusion: Hood, J. W. 0689
  - Sandoval County, Valle Grande and Valle Toledo*
    - Hydrology: Conover, C. S. 0400
  - Santa Fe area*
    - Water resources: Spiegel, Zane. 0871
  - Socorro County*
    - Hydrology field trip log: Hall, F. R. 0799
  - Socorro region*
    - Ground water: Bushman, F. X. 0016
  - Socorro Spring, Socorro County*
    - Tritium studies: Holmes, C. R. 0951
  - Southeastern*
    - Water resources: Dinwiddie, G. A. 0180
  - Streamflow characteristics*
    - Data, water year 1959: Reiland, L. J. 0927
  - Sunshine Valley*
    - Effects of drought on water resources: Winograd, I. J. 1494
  - Tularosa and Hueco Bolsons*
    - Effects of drought on water resources: Hood, J. W. 0928
  - Valencia County, eastern*
    - Ground water: Titus, F. B. 1055
- New York**
- Canals*
    - Great Lakes-Hudson River waterway: U.S. Congress, Senate. 1085
  - Delaware County*
    - Ground water: Soren, Julian. 0869
  - Delaware River Basin*
    - Water quality: Archer, R. J. 0043
  - Ground water*
    - General description: Heath, R. C. 1309
  - Kings County*
    - Ground-water withdrawal effects: Perlmutter, N. M. 1472
  - Long Island, Nassau and Queens Counties*
    - Hydrogeology: Swarzenski, W. V. 1019
  - Nassau County*
    - Ground-water recharge: Sawyer, R. M. 0907
  - Nassau County, Centre Island*
    - Saline-water intrusion: Isbister, John. 0317
  - Nassau County, South Farmingdale*
    - Ground-water movement: Perlmutter, N. M. 0603
  - Nassau County, southern*
    - Ground water: Perlmutter, N. M. 0599
  - Queens County*
    - Ground-water withdrawal effects: Perlmutter, N. M. 1472
  - Queens County, southeastern*
    - Ground water: Perlmutter, N. M. 0599
  - Rockland County*
    - Surface-water planning: Ayer, G. R. 0067

- New York**
- Saratoga County*
    - Ground water: Heath, R. C. 0748
  - Suffolk County, Brookhaven National Laboratory*
    - Geology: DeLaguna, Wallace. 0172
  - Suffolk County, Montauk Point area*
    - Ground water: Perlmutter, N. M. 0600
  - Suffolk County, Southold area*
    - Ground water: Crandell, H. C. 0142
  - Suffolk County, southwestern*
    - Ground-water-temperature variations: Pluhowski, E. J. 0614
  - Water quality*
    - Delaware River Basin: Archer, R. J. 0043
  - Water resources planning*: New York Temporary State Comm. 1304
  - Wayne County, Wolcott Creek-Port Bay*
    - Analysis for pesticides and detergents: Dugan, P. R. 0191
- North America**
- Radioactive fallout*
    - Soviet tests, 1961: Thatcher, L. L. 1390
- North Carolina**
- Asheville and Waynesville area*
    - Watershed runoff study: Cooper, A. J. 0402
  - Buncombe County*
    - Parker Branch Research watershed: Tennessee Valley Authority. 0952
  - Precipitation*
    - Sulfate and nitrate content: Gambell, A. W. 0767
  - Radioactivity in surface water*
    - June 1958-Dec. 1961: North Carolina Board of Health. 0564
  - Radioactivity of cistern water*
    - June and August 1962: North Carolina Board of Health. 1430
  - Streams, morphology*
    - Algae Communities: Whitford, L. A. 1188
  - Surface water*
    - Water-supply characteristics: Goddard, G. C., Jr. 0781
- North Dakota**
- Crosby-Mohall area*
    - Ground water: LaRocque, G. A., Jr. 1453
  - Emmons County, Linton-Strasburg area*
    - Ground-water resources: Randich, P. G. 0705
  - Irrigation*
    - Waterlogging prevention: LaRocque, G. A., Jr. 1453
  - Kidder County*
    - Ground-water resources: Bradley, Edward. 0265
  - McLean County, Max area*
    - Ground water: Armstrong, C. A. 1452
  - Souris River drainage basin*
    - Ground water: LaRocque, G. A., Jr. 1453
  - Stark County, Dickinson area*
    - Ground water: Schmid, R. W. 0843
  - Stutsman County*
    - Ground-water data: Huxel, C. J., Jr. 0700
  - Traill County, Hillsboro area*
    - Ground water: Jensen, H. M. 1454
  - Ward County, Berthold area*
    - Ground water: Randich, P. G. 1455
- North Dakota**
- Ward County, Max area*
    - Ground water: Armstrong, C. A. 1452
  - Ward County, Ryder area*
    - Ground water: Schmid, R. W. 0844
- Oceanography**
- Air-sea interaction*: National Academy of Sciences. 0458
  - Bibliograph to 1963*: Federal Council, Sci. and Technology. 1445
  - Continental shelf sedimentation*: Creager, J. S. 0146
- Oceans**
- Vertical distribution of radioactive materials*
    - Cesium 137 and Strontium 90: Rocco, G. G. 0731
- Ohio**
- Eastern coal mine fields*
    - Acid drainage: Hanna, G. P., Jr. 1271
  - Ground-water exploration*
    - Use of power auger: Bailey, N. G. 0086
  - Ground-water levels*
    - Statistical analysis, records of 20 wells: Klein, Marian. 0378
  - Maumee River*
    - Treatment, taste and odor removal: DuByne, E. T. 0189
  - Scioto River basin*
    - Water inventory: Ohio Division of Water. 0572
  - Surface water, selected streams*
    - Low-flow frequencies and storage requirements: Cross, W. P. 0151
  - Warren area*
    - Flood map: Edelen, G. W., Jr. 0207
  - Water conservation*: Harrold, L. L. 0819
  - Youngstown area*
    - Flood map: Edelen, G. W., Jr. 0206
- Ohio River**
- Water supply*
    - Streambed percolation: Rorabaugh, M. I. 0736
  - Withdrawals and streamflow*
    - Industrial and municipal reuse: Cleary, E. J. 0229
- Ohio River Basin**
- Water quality monitoring*
    - Establishing network station: Stierle, Harry. 1273
- Ohio River Valley**
- Quality surveillance*
    - Electronic monitor system: Cleary, E. J. 0228
- Oil-field hydrology**
- Aquifer below oil or gas reservoir*
    - Water movement: Selim, M. A. 0884
  - Cesium and rubidium in water*
    - Flame spectrophotometry: Collins, A. G. 0242
  - Diffusion coefficients*
    - Hydrocarbons in water: Saraf, D. N. 1469
  - Ground-water contamination from brines*
    - Kentucky, Upper Big Pitman Creek basin: Hopkins, H. T. 0690
  - Pollution*
    - Kansas: Latta, B. F. 0301

- Oil-field hydrology**
- Water flooding*
  - Bacterial corrosion and plugging: Amstutz, R. W. 0054
  - Texas, Cochran County: Rayner, F. A. 0715
  - Water problems*
  - Alabama: Powell, W. J. 1471
- Oklahoma**
- Beaver Creek, Waurika Reservoir*
  - River survey: U.S. Army Corps of Engineers. 1073
  - Caddo County area*
  - Ground water, Rush Springs sandstone: Tanaka, H. H. 1022
  - Caddo County, Pond Creek basin*
  - Ground-water—surface-water relations: Clark, W. E. 0261
  - Ground-water levels*
  - 1956-60: Hart, D. L. 0821
  - Oklmulgee County*
  - Water resources: Motts, W. S. 0424
  - Panhandle*
  - Climatic cycles and water-table fluctuations: Marine, I. W. 0525
  - Sandstone Creek near Cheyenne*
  - Channel changes: Bergman, D. L. 0117
  - Soils*
  - Physical properties: Mathers, A. A. 0537
  - Surface-water quality*
  - Data, 1957-1958: Cummings, T. R. 0156
  - Woodward County*
  - Ground-water data: Wood, P. R. 1209
- Oregon**
- Baker County, Baker Valley*
  - Ground-water data: Ducret, G. L., Jr. 0190
  - Coos Bay area*
  - Ground water: Brown, S. G. 0002
  - Crook County, Prineville area*
  - Ground water: Robinson, J. W. 0730
  - Crooked River*
  - Prineville Dam: U.S. Bureau of Reclamation. 1349
  - Florence area, coastal dunes*
  - Ground water: Hampton, E. R. 0801
  - Ground-water levels*
  - Data: Sceva, J. C. 0910
  - Lower Columbia River*
  - Environmental radiological survey: Toombs, G. L. 1368
  - Molalla-Salem slope area*
  - Ground-water data: Hampton, E. R. 0802
  - Morrow County*
  - Water resources: Oregon Water Resources Board. 1041
  - Pacific slope basins*
  - Surface-water records, 1951-60: U.S. Geological Survey. 1392
  - Portland*
  - Ground-water problems: Brown, S. G. 0003
  - South Coast Basin*
  - Water resources, flood control: Oregon Water Resources Board. 1040
  - Trask River basin*
  - Waterpower resources: Young, L. L. 1227
- Oregon**
- Umatilla River basin*
  - Water resources: Oregon Water Resources Board. 1041
  - Umpqua River*
  - Temperature studies: Delay, W. H. 1363
  - Wasco County, Orchard Syncline*
  - Ground water: Newcomb, R. C. 0472
  - Water-supply management*
  - Quality-control program: Towne, W. W. 1265
  - Willamette River basin, middle*
  - Water resources: Oregon Water Resources Board. 1042
- Pacific Islands**
- Samoa*
  - Ground water: Davis, D. A. 0163
- Pacific Northwest**
- Columbia River Basin*
  - Streamflow conditions and base flow, 1962: Orem, H. M. 0956
  - Irrigation trends*: Swarner, L. R. 1017
  - Water resources planning*
  - Review: Bessey, R. F. 1357
  - Water-quality control*
  - Management: Towne, W. W. 1265
- Pakistan**
- Indus Basin Project link canals*
  - Sediment control investigation: Mao, Shieh-Wen. 0522
- Pecos River basin**
- Phreatophyte control*
  - Hearing before U.S. Senate Subcommittee on Irrigation and Reclamation: U.S. Congress, Senate. 1083
- Pennsylvania**
- Butler County, Mercer quadrangle*
  - Ground water: Poth, C. W. 0553
  - Ground-water levels*
  - Observation-well program: Poth, C. W. 0554
  - Lawrence County, Mercer quadrangle*
  - Ground water: Poth, C. W. 0553
  - Lawrence County, Neshannock quadrangle*
  - Ground water: Carswell, L. D. 1492
  - Lebanon Valley*
  - Hydrogeology: Meisler, Harold. 0547
  - Mercer County, Mercer quadrangle*
  - Ground water: Poth, C. W. 0553
  - Mercer County, Neshannock quadrangle*
  - Ground water: Carswell, L. D. 1492
  - Surface water*
  - Chemical quality: Durfor, C. N. 0196
  - Susquehanna River, Harrisburg*
  - Water-quality variations: Anderson, P. W. 0045
- Permafrost**
- Bibliography*: U.S. Army, CRREL. 1069
  - Patterned ground*
  - Hydrothermal regimen: Black, R. F. 0130
- Permeability**
- Aquifers*
  - Radioactivity transport: Schroeder, M. C. 1448
  - Bibliography*: Richter, R. C. 0723
  - Capillary pressure measurement*
  - Vapor pressure method: Saito, Hikaru. 1296

- Permeability**
- Dam foundation sediments*
  - Seepage hydraulics: Hammad, H. Y. 0800
  - Data*
  - Glacial till: Norris, S. E. 0563
  - Determination*
  - Formation density logs: Alger, R. P. 0059
  - Geophysical prospecting: Breusse, J. J. 0272
  - Pore size distribution: Brutsaert, Wilfried. 0007
  - Various methods: Bentall, Ray. 0113
  - Water-table aquifers: Jacob, C. E. 0322
  - Determination for oil reservoirs*
  - Use of transient pressure curves: Scott, J. O. 1384
  - Directional*
  - Sandstone, petrology: Potter, P. E. 0616
  - Sedimentary structures: Mast, R. F. 0532
  - Dispersion of tracers*
  - Effect on ground-water flow timing: Theis, C. V. 1420
  - Estimation from aquifer tests*
  - Graphical multiple-regression analysis: Jenkins, C. T. 0327
  - Evaluation*
  - Capillary pressure curves: Rieckmann, Martin. 1295
  - Hydraulic fracturing*
  - Effect of existing fractures: Lamont, Norman. 0288
  - Porosity and surface areas*
  - Flow formulas: Chilingar, G. V. 0253
  - Sand*
  - Hydraulics, laminar and turbulent flow: Anandakrishnan, M. 0053
  - Sandstone*
  - Effect of stress: Gray, D. H. 0789
  - Snow pack*
  - Air flow rate: Yen, Yin-Chao. 1221
  - Soil compaction*
  - Measurement using hydraulic conductivity: Schmidt, Roy H. 0915
  - Soil cores*
  - Strain gage pressure cell method: Bianchi, W. C. 0121
  - Water-sensitive rocks*
  - Analytical techniques: Hewitt, C. H. 1388
  - Persian Gulf**
  - Hydrology: Sugden, W. 0991
  - Photogrammetry**
  - Terminology
  - Photography and imagery: Robinove, C. J. 0728
  - Phreatophytes**
  - Control
  - Pecos River basin: U.S. Congress, Senate. 1083
  - Growth study**
  - Arkansas River valley, lower: Bittinger, M. W. 1301
  - Saltcedar**
  - Growth and water use: VanHylckama, T. E. A. 1109
  - Pollution**
  - ABS*<sup>35</sup>
  - Adsorption on kaolinite: Wayman, C. H. 1166
  - Accidental*
  - Phenol compounds, small watercourse: Krombach, H. 0392
  - Acid mine drainage*
  - Research potentialities: Hanna, G. P., Jr. 0806
  - Agricultural*
  - Kansas: McVicker, D. S. 0453
  - Artificial recharge*
  - Illinois, Peoria: Harmeson, R. H. 0814
  - Bacterial*
  - Sampling technique: Noble, R. E. 1429
  - Biologic, streams*
  - Alaska, Anchorage: Alaska Dept. of Health and Welfare 0071
  - Causes*
  - Kansas, conference: Kansas Academy of Science. 0353
  - Control*
  - Better State laws needed: Walton, Graham. 1134
  - Bibliography, selected biological: Ingram, W. M. 0312
  - Federal politics: Langer, Elinor. 0296
  - Publications, U.S. Robt. A. Taft Sanitary Eng. Center: R.A. Taft San. Eng. Center. 1101
  - Control, research*
  - Information retrieval: Faber, H. A. 0626
  - Role of the scientist: Berger, B. B. 1291
  - Degradoability of detergents*
  - U.S. Senate Committee on Public Works, hearings: U.S. Congress, Senate. 1402
  - Detergents*
  - Adsorption studies: Wayman, C. H. 1167
  - Legislation for control: American Water Works Association. 0075
  - Detergents and commercial fertilizers*
  - Occurrence, removal: Meier, E. B. 0544
  - Detergents, anionic and nonionic*
  - Biodegradation, aerobic and anaerobic: Wayman, C. H. 1169
  - Diffusion by tidal motion*
  - Delaware River: O'Connor, D. J. 0567
  - Domestic wells*
  - Factors involved: Heukelekian, H. 0941
  - Escherichia coli*
  - Survival in detergent solutions: Wayman, C. H. 1163
  - Evaluation and control*
  - Literature review, 1962: Okun, D. A. 0573
  - Great Britain*
  - Control legislation: Scott, G. T. G. 0879
  - Industrial*
  - Literature review, 1962: Okun, D. A. 0573
  - Industrial wastes and pesticides*
  - Effect on water quality and aquatic life: Neel, J. K. 0461
  - Missouri River*
  - Taste and odor control: Erdei, J. F. 0223
  - Odor*
  - Actinomycetes: Romano, A. H. 0735

- Pollution**
- Organic*
    - Sampling technique: Middleton, F. M. 1270
  - Organic, control*
    - Taste and odor: Erdei, J. F. 0223
  - Petroleum industry*
    - Kansas: Latta, B. F. 0301
  - Prevention*
    - Paper and paperboard mills: Masselli, J. W. 0531
  - Pulp and paper industry*
    - Improvements in past 20 years: Baldwin, P. C. 0094
  - Radioactive*
    - Control, research: Tsivoglou, E. C. 1061
  - Reduction*
    - Recharge induced from surface streams: Klaer, F. H., Jr. 0377
  - Removal in water-saturated soils*
    - ABS, dissolved solids, and bacteria: Page, H. G. 0584
  - Research program*
    - Mississippi River: Schroeffer, G. J. 0920
  - Rivers*
    - Public water supplies, Europe and U.S.: Biemond, Cornelius. 0122
  - Rivers, inflow and dilution*
    - Water quality management investigation: Woods, P. C. 1211
  - Stream self-purification*
    - Chemistry: Leclerc, E. 0478
  - Treatment*
    - Small business concerns: U.S. Congress, Senate. 1402
  - Treatment works, construction*
    - U.S. Senate Committee on Public Works, hearings: U.S. Congress, Senate. 1402
  - United States*
    - Control, status: Atkins, C. H. 0066
  - Waste of different types*
    - Predicting potential damage: McDermott, G. N. 1275
  - Water quality criteria:* McKee, J. E. 0447
- Popular literature**
- Water resources*
    - Nebraska: Nebraska Resources Division. 1039
- Porosity**
- Capillary pressure measurement*
    - Vapor pressure method: Saito, Hikaru. 1296
  - Determination in carbonate and evaporite deposits*
    - Well log analysis: Savre, W. C. 0906
  - Fine-grained sediments*
    - Volume change, low to moderate overburden loads: Meade, R. H. 1440
  - Measurement*
    - Air displacement: Fleming, J. D. 0754
  - Naturally fractured reservoirs*
    - Hydrologic behavior: Warren, J. E. 1154
  - Permeability and surface areas*
    - Flow formulas: Chilingar, G. V. 0253
  - Pore-size distribution*
    - Rocks of low permeability: Rieckmann, Martin. 1295
  - Related to load, particle size and sorting*
    - Silty sediments: Meade, R. H. 0542
- Porosity**
- Volume change*
    - Fine-grained sediments: Meade, R. H. 1440
- Poros media**
- Dispersion*
    - Ground-water tracers: Ogata, Akio. 0570
    - Longitudinal and lateral: Harleman, D. R. F. 1477
  - Dispersion pattern*
    - Radioisotope tracers: Nelson, R. W. 1419
  - Flow experiments*
    - Miscible fluids of unequal density: Crane, F. E. 0144
  - Flow of gas*
    - Laboratory heat method: Miller, J. S. 0644
  - Flow through, colloidal suspensions*
    - Effects of viscosity and hydraulic gradient: Rausch, D. L. 0709
- Fluid flow**
- Capillary viscometer: VanWazer, J. R. 1113
  - Velocities of fluids of different viscosities: Yih, Chia-Shun. 1222
- Fluid flow equations**
- Parameters: Scheidegger, A. E. 1378
- Fluid flow, partially saturated media**
- Computer program: Reisenauer, A. E. 1331
- Ground-water flow lines**
- Model study: Lehr, J. H. 0482
- Hydraulic conductivity**
- Calculation: Schmidt, Roy H. 0915
- Hydraulics**
- Steady-state fingering, unique solutions to equations: Outmans, H. D. 0580
- Hydrodynamic dispersion**
- Review of research, 1960-1963: Nielsen, D. R. 0474
- Interstitial water**
- Sampling techniques: Scholl, D. W. 0917
- Model study**
- Glass bead-glycerol, water table work: Ligon, J. T. 0494
  - Recharging wells, hydraulics: Mobasher, Fereidoun. 0411
- Particle density of porous solids**
- Apparatus for determination: Cartan, F. O. 0245
- Sand**
- Laminar and turbulent flow:  
Anandakrishnan, M. 0053
- Sandstone, saturated and unsaturated**
- Miscible displacement: Corey, J. C. 0407
- Two-phase flow**
- Evaluation of scale-up laws: Nielsen, R. L. 0476
- Water flooding**
- Unstable miscible displacement: Koval, E. J. 0388
- Potomac River Basin**
- Ground-water resources:* Johnson, P. M. 0342
  - Sediment sources and transport:* Wark, J. W. 1153
  - Surface-water quality*
    - Chemical and sediment study: Wark, J. W. 1152

**Potomac River basin***Washington Metropolitan region*

Sediment control program: Guy, H. P. 0795

*Water quality network*Compilation of data, 1963; Interstate Comm.  
Potomac River Basin. 1034*Water resources development*: Interstate Comm.  
Potomac River Basin. 1438U.S. Army Corps of Engineers Report: U.S.  
Army Corps of Engineers. 1070*Water-resources management*

Need for total planning: Johnson, C. J. 0336

**Precipitation***Autocorrelation of rainfall and streamflow*:

Matalas, N. C. 0534

*Cloud seeding*

Australia: Smith, E. J. 0856

Estimate of hydrologic results: Crawford, N.  
H. 0145

Evaluation: Elliott, R. D. 1404

*Cloud seeding, long term*

Necaxa watershed, Mexico: Siliceo, E. P. 1004

*Columbia River Basin*

Water forecast for 1962, outcome:

Willoughby, L. B. 0957

*Conservation*

Research: Meyers, L. E. 0656

*Contribution to runoff*

Traced with fallout: Miyake, Y. 0964

*Convective storm patterns*Southwestern United States: Osborn H. R.  
0577*Data*Runoff estimation, small rural watersheds:  
Witherspoon, D. F. 1203*Dense network*Water resources research program:  
Changnon, S. A., Jr. 1035*Determining mean watershed rainfall*

Accuracy: McGuinness, J. L. 0446

*Deuterium in raindrops*: Woodcock, A. H. 1210*Drought climatology*

Illinois: Huff, F. A. 0929

*Estimation*

Areas of sparse data: Reich, B. M. 0717

*Glacial basin*Water budget instrumentation: Tangborn, W.  
V. 1023*Infiltration*

Artesian aquifer: Thomas, H. E. 1506

*Interception by vegetation*

Reappraisal: Goddell, B. C. 0782

*Measurement*

At storm-water inlets: Knapp, J. W. 0381

Comparison of five installations: Allis, J. A.  
0061Problems with increased wind speed: Weiss,  
L. L. 1179*Radioactivity*

Cerium isotopes content: Menon, M. P. 0650

*Radiostrontrium fallout*

Tracing runoff: Yamagata, N. 1412

**Precipitation***Rain gauges*Tests of 3 nonstandard types: Musgrove, R.  
H. 0435*Rain-gage recorder*Use of water-stage recorder attachment:  
Brice, H. D. 0274*Related to recharge, springs*

Traced with tritium: Holmes, C. R. 0951

*Related to river flow*Climatic fluctuation study: Yevdjevich, V. M.  
1220  
Upper Colorado River: Marlatt, William.  
1485*Review of research, 1960-1963*: Hershfield, D.  
M. 0940*Runoff relation*

Statistics: Matalas, N. C. 0533

Extrapolation of data: Christopoulos, C. 1499

*Showers sizes*

Frequency distribution: Dennis, A. S. 0173

*Simulator*Infiltration measurement: McQueen, I. S.  
0451*Sr<sup>89</sup> concentration*

Convective showers: Kruger, Paul. 0393

*Storm*Three-dimensional wind flow: Myers, V. A.  
0438*Sulfate and nitrate content*North Carolina and Virginia: Gambell, A. W.  
0767*Weather forecasting*Meteorological principles: O'Connor, J. F.  
0568**Publications lists***Texas Water Commission*: Texas Water  
Commission. 1033**Quality of water***ABS<sup>35</sup> in ground water*

Adsorption on illite: Wayman, C. H. 1164

*Acid-base equilibria*

Fundamentals: Weber, W. J., Jr. 1173

*Agricultural use*

Research: Lunt, O. R. 1299

*Algae communities*

North Carolina streams: Whitford, L. A. 1188

*Bacteria*Survival of Escherichia coli in detergent  
solutions: Wayman, C. H. 1163*Biodegradation of ABS*Aerobic and anaerobic conditions: Wayman,  
C. H. 1165*Calcium carbonate saturation*

Florida ground water: Back, William. 0084

*Carbonate movement and deposition*

Soils: Arkley, R. J. 041

*Carboxylic acids in streams*

Characterization: Lamar, W. L. 0283

*Changes*Recharge induced from surface streams:  
Klaer, F. H., Jr. 0377

**Quality of water***Chemical analyses*

Subsurface waters, different geological environments: White, D. E. 1401

*Color, organic*

Characteristics: Black, A. P. 0127

*Color removal*

Organic compounds, coagulation stoichiometry: Black, A. P. 0129

*Coloration*

Chemistry, fulvic acids: Black, A. P. 0128

*Contaminant travel*

Industrial wastes and pesticides: Neel, J. K. 0461

*Corrosion problems*

Water distribution systems: Illinois

Department of Public Health. 1359

*Criteria, literature review*

McKee, J. E. 0447

*Delaware River Basin*

New York State: Archer, R. J. 0043

*Detergent effects on viscosity*

Clay-water suspensions containing bacteria: Wayman, C. H. 1162

*Detergents*

Legislation for control: American Water

Works association. 0075

Orsanco detergent subcommittee report:

Orsanco Detergent Subcommittee. 0575

*Detergents, commercial fertilizers*

Significance in supply: Meier, E. B. 0544

*Detergents, household synthetic*

Components in water and sewage: Ohio River Valley. 1409

*Drinking water, 1961, radioactivity*

Analysis Program, U.S. Public Health Service:

U.S. Public Health Service. 1095

*Ecology of fresh water*: Macan, T. T. 0514*Effects of irrigation*

Bibliography: U.S. Public Health Service.

1100

*Effects of microorganisms*: Kuznetsov, S. I. 0395*Fulvic acids*

Characteristics: Black, A. P. 0128

*Ground water*

Chemical equilibrium, some aspects: Hem, J. D. 0833

*Iron*

Georgia: Joyner, B. F. 0351

*Irrigation*

Kansas: Jacobs, H. S. 0325

Salinity conditions: Wilcox, L. V. 1194

Western United States, 1959: U.S. Geological Survey. 1091

*Lakes*

Chemical characteristics: Hayes, F. R. 1235

Irrigation use: Wilcox, J. C. 1507

Oxygen production: Eberly, W. R. 1274

*Lead*

Removal by aquatic organisms: Oborn, E. T. 0566

*Lithium survey*

California: Bradford, G. R. 0264

*Management*

Comprehensive planning: Reed, P. W. 1272

Kansas: Metzler, D. F. 0654

**Quality of water***Management*

Research: Poston, H. W. 1279

Temperature control: Sylvester, R. O. 1362

*Manganese*

Chemical equilibria: Hem, J. D. 0836

Chemical equilibria and oxidation: Hem, J. D. 0835

*Minor element content*

Major world rivers: Durum, W. H. 0198

*Natural isotopes survey*

South Africa: Vogel, J. C. 0974

*Natural radium, ground water in Illinois*

Geologic occurrence: Emrich, G. H. 0220

*Network, West Virginia*

Data compilation, 1963: West Virginia Div. Water Resources. 1184

*Odor*

Actinomycetes: Romano, A. H. 0735

*Ohio River Basin*

Establishing network station: Stierle, Harry. 1273

*Organic compounds*

Direct determination by flame ionization gas chromatography: Weiss, C. M. f393

*Organic geochemistry*

Humus: Swain, F. M. 0992

*Organic pigments*

Geochemistry: Dunning, H. N. 0193

*Organic pollutants, taste, odor*

Missouri River: Erdei, J. F. 0223

*Pacific Northwest*

Management program: Towne, W. W. 1265

*Potomac River Basin*

Data compilation: Interstate Comm. Potomac River Basin. 1034

*Precipitation kinetics*

Effect of sedimentation: Walton, A. G. 1133

*Public supply*

Fluoridation, AWWA policy statement:

American Water Works Association. 0076

Ground water, Illinois: Larsen, T. E. 0300

Radium content, Savannah River area: Edgar, W. F. 1459

*Radioactivity*

Deuterium in raindrops: Woodcock, A. H. 1210

*Radioactivity contamination*

Recommended standards and control

practice: Tsivoglou, E. C. 1047

*Radioactivity in major river basins*

Review of data, 1957-1962: Weaver, Leo.

1171

*Radiostrontium in runoff*

Hydrologic significance: Yamagata, N. 1412

*Reservoirs*

Improved with air injection: Ford, M. E., Jr. 0757

Manganese in solution: Ingols, R. S. 0311

*River pollution*

Inflow and dilution management: Woods, P. C. 1211

*River with highly variable flow*

Control program: Okun, D. A. 1268

- Quality of water**
- Rivers*
    - Quality-quantity correlations: Ward, J. C. 1150
  - Saline water*
    - Chemistry: Krieger, R. A. 0390
  - Seasonal changes*
    - Ground water, Alaska, northwestern: Feulner, A. J. 0642
  - Seasonal relations*
    - Algae communities: Whitford, L. A. 1188
  - Sedimentation and chemistry study*
    - Potomac River Basin: Wark, J. W. 1152
  - Self-purification of streams*
    - Effect of chemistry and temperature: Leclerc, E. 0478
  - Silica*
    - Organic geochemistry: Siever, Raymond. 0891
  - Strontrium*
    - Occurrence and distribution, natural waters: Skoustad, M. W. 0853
  - Taste and odor*
    - Bacterial metabolites: Morris, R. L. 0422
    - Detergent, ABS: Cohen, J. M. 0234
    - Problems with river water: DuByne, E. T. 0189
  - Temperature*
    - Effects on water use: Everts, C. M. 1361
  - Trace elements, significance*
    - Public supplies: Taylor, F. B. 1027
  - United States*
    - Radioactivity, raw surface water, 1962-63: U.S. Public Health Service. 1096
    - USGS network operation: Swenson, H. A. 1020
- Quality-of-water techniques**
- 2, 4-Dichlorophenoxy acetic acid*
    - Determination in surface waters: Aly, O. M. 0062
  - Accidental pollution, phenol compounds*
    - Small watercourse: Krombach, H. 0392
  - Acid-base equilibria*
    - Fundamentals: Weber, W. J., Jr. 1173
  - Aluminum*
    - Fluorometric and spectrophotometric determination: Noll, C. A. 0558
  - Application of Gibbs adsorption equation*
    - Detergent solutions: Wayman, C. H. 1167
  - Aqueous solutions*
    - Attenuated total reflectance infrared analysis: Katlafsky, Bernard. 0357
  - Automatic sampling*
    - Advances: Ferguson, G. E. 0636
  - Bacterial sampling*
    - Sodium thiosulfate influence: Noble, R. E. 1429
  - Bromide*
    - Spectrophotometric determination, indirect: Fishman, M. J. 0752
  - Calcium determination*
    - Flame-photometric method: Rowe, J. J. 0896
  - Carbon-14 dating*
    - Preparation of water sample: Feltz, H. R. 0635
  - Quality-of-water techniques*
  - Cesium and rubidium in oil field waters*
    - Flame spectrophotometry: Collins, A. G. 0242
  - Color, organic*
    - Characteristics: Black, A. P. 0127
  - Data analysis*
    - Lower Columbia River survey: Deery, H. A. 1264
  - Diffusion coefficients of hydrocarbons*
    - Measurement: Saraf, D. N. 1469
  - Dissolved-oxygen determination*
    - Test of a continuous recorder: McCartney, David. 0441
  - Establishing national network station*
    - Ohio River Basin, New Harmony, Ind.: Stierle, Harry. 1273
  - Filter-fluorometer, vertical-axis, transmission-*
    - Study of multicomponent mixtures: Fletcher, M. H. 0756
  - Filtering*
    - Field unit: Drake, P. G. 0187
  - Flame-photometric method*
    - Calcium determination: Rowe, J. J. 0896
  - Gas chromatography*
    - Organic compound determination: Weiss, C. M. 1393
    - Organic compound determination, carboxylic acids: Lamar, W. L. 0283
    - Pesticide determination: Teasley, J. I. 1029
  - Gross beta activity determination*
    - Principles and methods: Barker, F. B. 0097
  - Hardness, calcium and magnesium*
    - Semi-automatic determination, photometric method: Lacy, J. 0396
  - Hardness, trace concentrations*
    - Continuous measurement: Demmitt, T. F. 1353
  - Industrial and waste water analysis*: American Soc. for Testing and Materials 069
  - Instrumentation*
    - Monitoring, reservoirs: Weiss, C. M. 1178
  - Interstitial water*
    - Sampling techniques: Scholl, D. W. 0917
  - Iron and manganese stabilization*
    - Chemical injection wells: Pittendreigh, L. M. 0613
  - Manganese*
    - Solution mechanism, reservoirs: Ingols, R. S. 0311
  - Measurement of fluorescence*
    - Vertical-axis transmission-type filter-flurometer: Fletcher, M. H. 0755
  - Mineral determination methods*
    - Evaluation: Lishka, R. J. 0496
  - Neutron activation*
    - Oxygen determination: Volborth, Alexis. 1120
  - Neutron activation analysis*
    - Determination of total sulfur: Wayman, C. H. 1160
  - Nitrate determination*
    - Ultraviolet spectrophotometry: Armstrong, F. A. J. 0068
  - Organic compounds, color removal*
    - Coagulation stoichiometry: Black, A. P. 0129

**Quality-of-water techniques***Organic pollution*

Mega Sampler: Middleton, F. M. 1270

*Organic substances, determination*Rapid combustion method: VanHall, C. E.  
1107*pH determination*Differences between field and laboratory  
measurements: Roberson, C. E. 0724*Polarographic determination*

Nitrate nitrogen: Frazier, R. E. 0760

*Polarographic methods*

Water and wastes: Ballinger, D. G. 0096

*Pollution monitoring, tracing*

Radioisotope uses: Feely, H. W. 0634

*Polyacrylamides, traces*

Determination: Crummett, W. B. 0153

*Radiochemical tracer*ABS<sup>35</sup> adsorption, montmorillonite: Wayman,  
C. H. 1161ABS<sup>35</sup> adsorption on illite: Wayman, C. H.  
1164*Radiotracer method*

Fluoride analysis: Moore, F. L. 0416

*Reservoir stratification*

Air injection circulation: Ford, M. E., Jr. 0757

*Rivers*

Electronic monitor system: Cleary, E. J. 0228

*Sampling*

Saline ground water: Kohout, F. A. 0386

*Sampling program*

Mississippi River: Schroeper, G. J. 0920

*Spectral analysis*Stream and estuary studies: Wastler, T. A.  
1156*Spectrophotometric*

Bromide ion: Zitomer, Fred. 1231

*Spectrophotometric determination, indirect*

Bromide traces: Fishman, M. J. 0752

*Spectrophotometry, ultraviolet*Nitrate determination: Armstrong, F. A. J.  
0068*Sulfur determination*Neutron activation analysis: Wayman, C. H.  
1160*Surfactant concentration*Air-water interface during evaporation:  
Jackson, F. L. 0319*Taste and odor removal*

River water: DuByne, E. T. 0189

*Temperature at maximum density*Measurement of sonic velocities: Eklund,  
Henning. 0209*Temperature of reservoirs*

Computing average: Boyer, P. B. 1364

*Temperature prediction*Current theories and studies: Zeller, Robert.  
1366*Waste characterization*Methods and equipment: McDermott, G. N.  
1275*Waste control program*River with highly variable flow: Okun, D. A.  
1268**Quality-of-water techniques***Water analysis*Review of literature, 1960-1962: Skougstad,  
M. W. 0854*Water and wastes*

Polarographic methods: Ballinger, D. G. 0096

*Water-temperature studies*

Instrumentation: Moore, A. M. 1365

*Well logging*Gamma-ray spectroscopy: Caldwell, R. L.  
0021*Zinc determination, natural waters*Evaluation of procedures: O'Connor, J. T.  
0569**Radioactivity***Aqueous behavior of radionuclides*Strontium-85, cesium-137, zinc-65, cobalt-  
60: Friend, A. G. 1247*Aquifer contamination*

Laboratory studies: Schroeder, M. C. 1448

*Beaches*Relationship to watershed geology: Byrly, J.  
R. 1314*Biological transport of radionuclides in streams:*

Krumholz, L. A. 1257

Fish: Foster, R. F. 1258

Phosphorus-32: Hooper, Frank. 1256

*Bomb fallout*Measuring snow accumulation: Picciotto, E.  
0609*California surface water*

July-Dec. 1962: California Bur. of

Radiological Health. 0023

1961-June 1962: California Bur. of

Radiological Health. 0022

*Carbon-14 and tritium*Ground-water age determination: Munnich,  
K. O. 0973*Carbon isotopes*Ground-water age and movement: Vogel, J.  
C. 0959*Cesium 137 and Strontium 90*

Oceans: Rocco, G. G. 0731

*Chromium-51-EDTA and tritium*

Double tracers, ground-water flow:

Knutsson, G. 1413

*Contamination criteria: McKee, J. E. 0447**Determination in water*

General discussion: Barker, F. B. 0097

*Deuterium*

In raindrops: Woodcock, A. H. 1210

*Distribution in soils*

Related to permeability: Walton, Alan. 1132

*Drinking water, 1961*

U.S. Public Health Service Analysis Program:

U.S. Public Health Service. 1095

*Effluent decontamination*Calcium-ferric phosphate process: Frost, C.  
R. 0740*Emergency decontamination preparations*

Canada, Chalk River: Meservey, A. B. 0651

*Fallout, Antarctic snow*

Used for dating: Vickers, W. W. 1117

*Fallout behavior*

Soils and plants: Frere, M. H. 1322

- Radioactivity**
- Fresh flowing water*
    - Isotope ratios mollusk shells: Weber, J. N. 1172
  - Gamma-radiation attenuation*
    - Measurement of water content, porous materials: Davidson, J. M. 0161
  - Gross beta determination in water*
    - Principles and methods: Barker, F. B. 0097
  - Ground-water monitoring*: Davis, S. N. 1351
  - Industrial waste*
    - Literature review, 1962: Okun, D. A. 0573
  - Isotopes in solution*
    - Removal by earth materials: Wilding, M. W. 1460
  - Levels in Lake Michigan*: Risley, Clifford, Jr. 1281
  - Major river basins*
    - Review of data, 1957-1962: Weaver, Leo. 1171
  - Minnesota surface water*
    - April-November 1962: Minnesota Department of Health. 0672
    - Dec. 1962-June 1963: Minnesota Department of Health. 0673
  - Natural isotopes in water*
    - South Africa: Vogel, J. C. 0974
  - North Carolina cistern water*
    - June and August 1962: North Carolina Board of Health. 1430
  - North Carolina surface water*
    - June 1958-Dec. 1961: North Carolina Board of Health. 0564
  - Oregon, Lower Columbia River*
    - Environmental survey: Toombs, G. L. 1368
  - Pollution control*
    - Recommended standards: Tsivoglou, E. C. 1047
    - Uranium milling industry: Tsivoglou, E. C. 1061
  - Precipitation*
    - Cerium isotopes content: Menon, M. P. 0650
  - Radio caesium, radionuclide fallout*
    - Precipitation-runoff relations: Miyake, Y. 0964
  - Radioisotope use*
    - Water supply applications: Feely, H. W. 0634
  - Radioisotopes in hydrology*
    - Proceedings of a symposium: International Atomic Energy Agency. 0970
  - Radionuclide movement in soils*
    - U.S. Geol. Survey studies: Clebsch, Alfred, Jr. 1318
  - Radionuclide behavior*
    - Columbia River: Nielsen, J. M. 1250
  - Radionuclide movement*
    - Role of bottom organisms: Nelson, D. J. 1254
  - Radionuclide sorption and release*
    - Sediments in fluvial and lagoonal environments: Clanton, U. S. 1239
    - Sediments in fluvial and lagoonal environments: Reynolds, T. D. 1251
  - Radionuclide transport*
    - Fresh water systems: Kornegay, B. H. 1246
- Radioactivity**
- Radionuclide uptake*
    - Ground water-clay mineral system: Kaufman, W. J. 1352
  - Radiostronium fall-out*
    - Significance in runoff: Yamagata, N. 1412
  - Radiostronium in U.S. tap water*
    - July-Dec. 1962: U.S. Atomic Energy Commission. 1077
    - March-June 1962: U.S. Atomic Energy Commission. 1076
  - Radiotracers*
    - Fluoride determination: Moore, F. L. 0416
  - Radium*
    - Natural occurrence, ground water in Illinois: Emrich, G. H. 0220
  - Radium in drinking water*
    - South Carolina, Savannah River area: Edgar, W. F. 1459
  - Reactor effluent*
    - Reduction methods: Silker, W. B. 1474
  - Sediments*
    - Columbia River: Gross, M. G. 1323
  - Snow measurement*
    - Radioactive sources used: Anderson, H. W. 0046
  - Sr<sup>90</sup> concentration*
    - Precipitation: Kruger, Paul. 0393
  - Stream sediments*
    - Uptake and transport: Sayre, W. W. 0908
  - Stream transportation, radionuclides*
    - Dispersion, sediments: Sayre, W. W. 1487
  - Studies on fate of radionuclides*
    - Clinch River: Parker, Frank. 1253
  - Surface water, raw*
    - National Water Quality Network, monthly data: U.S. Public Health Service. 1096
  - Surface-water monitoring*
    - Michigan: Michigan Water Resources Commission. 1464
  - Tracers*
    - Applications to ground-water hydrology: Nelson, R. W. 1419
    - Open-channel discharge measurements: Timblin, L. O., Jr. 0971
    - River dilution and flow measurement: Kobayashi, M. 0960
    - River flow measurement: Clayton, C. G. 1414
    - River flow measurement: Kato, Massao. 1416
    - Sand transport measurement: Lean, G. H. 1417
    - Sediment movement, rivers and harbors: Cummins, R. S. 0155
    - Underground pool hydraulics in a karst region: Smith, D. B. 1415
  - Transport of radionuclides*
    - Dispersion measurements: Patterson, C. C. 1259
  - Transport of sorbed radionuclides*
    - Estuarine sedimentation: Kaufman, W. J. 1252
  - Tritium*
    - Fallout from Soviet tests in 1961: Thatcher, L. L. 1390
    - Ground-water tracing: Burdon, D. J. 1410

- Radioactivity**
- Tritium*
    - In hydrologic cycle: Libby, W. F. 0491
    - Tracing soil-moisture diffusion: Nakayama, F. S. 0456
  - Tritium from underground explosions*
    - Ground-water contamination: Stead, F. W. 0997
  - Tritium studies*
    - Socorro Spring, New Mexico: Holmes, C. R. 0951
  - Uptake by algae*: Austin, J. H. 1255
  - Waste disposal*
    - Atomic Energy Commission, technical and administrative aspects : Belter, W. G. 0107
    - Dispersion in Columbia River: Beckman, G. E. 1458
    - Fresh water: International Atomic Energy Agency. 0314
    - Management: Bernard, Harold. 1269
    - Waste disposal, liquid Management in U.S.: Belter, W. G. 0108
- Recharge**
- Alluvium, river beds*
    - West Virginia, Kanawha River Valley: Wilmoth, B. M. 1197
  - Chemical injection wells*
    - Suppression of Fe-Mg biological activity: Pittendreigh, L. M. 0613
  - Ground water*
    - Effect of urbanization: Sawyer, R. M. 0907
    - Natural rate: Farvolden, R. N. 0631
  - Induced from streams*
    - Mathematical model: DeWiest, R. J. M. 0176
  - Mathematical model*
    - Colorado, Fountain Creek Valley: Trelease, F. J. 0925
  - Measurement*
    - Seepage meter: Bouwer, Herman. 0262
  - Precipitation*
    - Tracing with tritium: Holmes, C. R. 0951
  - Rates*
    - Indiana, Lake County: Rosenshein, J. S. 0737
  - Wells*
    - Ground-water hydraulics: Mobasher, Fereidoun. 0411
- Recharge, artificial**
- Air conditioning and storm water*
    - Tracing flow by temperature and phosphates: Sampayo, F. F. 0840
  - Arkansas, Grand Prairie region*
    - Environment and history: Engler, Kyle. 0222
  - Basin design, operation*
    - AWWA Task Group Report: American Water Works Association. 0073
  - Canada, Alberta, Driedmeat Lake*: Farvolden, R. N. 0632
  - Equipment and controls for studies*
    - Arkansas, Grand Prairie region: Sniegocki, R. T. 0862
  - Geochemical aspects*
    - Arkansas, Grand Prairie region: Sniegocki, R. T. 0864
- Recharge, artificial**
- Geometry of pits, model study*
    - Influence on ground-water flow: Dvoracek, M. J. 0202
  - Oregon, Portland*: Brown, S. G. 0003
  - Pit recharge, river water*
    - Illinois, Peoria: Harmeson, R. H. 0814
  - Principals of siphons*: Sniegocki, R. T. 0863
  - Proceedings of conference, 1963*: Schiff, Leonard. 1358
- River water storage**
- Public supply practice: Biemond, Cornelius. 0122
- Surface ponds**
- Radial flow behavior: Sunada, D. K. 1300
- Surface water, induced**
- Water quality factors: Klaer, F. H., Jr. 0377
- United States, projects in operation**
- AWWA Task Group report: American Water Works Association. 0074
- Washington**
- Whitman County: Foxworthy, B. L. 0758
- Wells**
- Problems: Sniegocki, R. T. 0865
- Research**
- Agricultural water quality*
    - Conference: Lunt, O. R. 1299
  - Erosion and sedimentation*
    - Review, United States 1960-1963: Wolman, M. G. 1206
  - Evaporation control*
    - Monolayer film: Koberg, G. E. 0384
  - Geochemistry of water*
    - Review, 1960-1963: Durum, W. H. 0197
  - Ground water*
    - Review, 1960-63: LaMoreaux, P. E. 0289
    - Use of isotope methods: Harpaz, Y. 1418
  - Hydraulics*
    - United States, 1963: Middleton, H. K. 0662
  - Hydrology*
    - Canada, 1963: Canada National Research Council. 0033
    - International cooperation: Nace, R. L. 0455
    - International programs: National Research Council. 0459
    - Long-term program of the International Hydrological Decade: U.N. Educ. Sci. Cultural Org. 1066
    - Universities Council: Hall, W. A. 1285
  - Radionuclide movement in soils*
    - U.S. Geol. Survey studies: Clebsch, Alfred, Jr. 1318
  - Saline-water conversion*
    - Bibliography: Kase, K. A. 1465
  - Soil moisture*
    - Temperature effects: Klute, A. 0380
  - Soil moisture measurement*
    - Review 1960-1963: van Bavel, C. H. M. 1105
  - Thermal springs, fumaroles, and hydrothermal*
    - Review, 1960-1963: White, D. E. 1185
  - Tracers*
    - Soil water movement: Wallo, E. M. 1097
  - Water conservation*: Meyers, L. E. 0656

**Research***Water pollution control*

U.S. Senate Committee on Public Works,  
hearings: U.S. Congress, Senate. 1402

*Water resources*

Federal activities: Federal Council, Sci. and  
Technology. 1446

Federal government: Revelle, Roger. 0932

Georgia, cooperative projects: Peyton,  
Garland. 0608

U.S. Government agencies: Federal Council,  
Sci. and Technology. 1444

*Water resources economics*

California: Tolley, G. S. 1336

*Water resources management*

United States: Wolman, Abel. 1205

*Water-quality management*: Poston, H. W. 1279*Water-resources development*

Engineering methods and materials, U.S.

Bureau Reclamation: U.S. Bureau of  
Reclamation. 1078

**Reservoirs***California*

Federal-State cooperation: Dominy, F. E.  
0184

*Design, single purpose*

Data sampling and analysis: Hall, W. A. 1043

*Effects on water temperature*: Sylvester, R. O.  
1362*Evaporation suppression*

Field evaluation: Walter, J. 1130

Survey of methods: American Water Works  
Association. 0079

Water temperature and monolayer efficiency:  
Wolbeer, H. J. 1212

Wind and monolayer efficiency: Crow, F. R.  
0152

*Great Basin, The*

Surface-water records, 1956-1960: U.S.  
Geological Survey. 1092

*Heat budget*

Calculation: Wolbeer, H. J. 1212

*Heat loss*

Calculation: Williams, G. P. 1196

*Lake Roosevelt*

Bottom-water release: Kramer, H. A. 1243

*Limestone terrane*

South-central Indiana: Gray, H. H. 0790

*Multi-purpose*

Operation for flood control: Beard, L. R. 0101

Water-supply planning: Haywood, R. W., Jr.  
0829

*Peak-stage measurement*

Plastic tube: Mills, W. B. 0668

*Planning and operation*

Water supply economics: Bower, B. T. 0263

*Potomac River basin*

Proposed, U.S. Army Corps of Engineers:  
U.S. Army Corps of Engineers. 1070

*Sedimentation*

Southern Wisconsin: Collier, C. R. 0241

*Snake River Basin*

Surface-water records, 1951-1960: U.S.  
Geological Survey. 1048

*Staffage system*: Neuberger, J. W. 0464**Reservoirs***Storage use*

Lowering river water temperatures: Kramer,  
H. A. 1243

*Storage-outflow relation*

Nonlinear: Shen, John. 1386

*Stratification, limnology*

Air injection circulation: Ford, M. E., Jr. 0757

*Temperature*

Computing average: Boyer, P. B. 1364

*Temperature control of streams*

Umpqua River, Oregon: Delay, W. H. 1363

*Water quality*

Manganese, solution mechanism: Ingols, R. S.  
0311

*Water quality changes*

Bank storage effects: Bliss, J. H. 0679

*Water quality monitoring*

Instrumentation: Weiss, C. M. 1178

*Water supply engineering*

Textbook: Twort, A. C. 1064

*Yield*

Application of "design period" approach to  
yield: Stall, J. B. 0872

*Yield prediction*

Probability method: Maughan, W. D. 0538

**Rhode Island***Ground-water data*

1960-1962: Hansen, A. J., Jr. 0807

*Pawcatuck River basin, upper*

Hydrologic data: Allen, W. B. 060

**Rio Grande basin***Effects of drought, 1942-56*: Thomas, H. E.  
0984**Rio Grande, upper***Water management*

Problems: Hay, John. 0746

**River-basin planning and development***Conference*

British Columbia, 1962: British Columbia

Nat. Res. 1312

*Conference, United Nations*: U.N., Office Secy.-

Gen. 1068

*Irrigation*

Columbia Basin Project, Washington:  
Mancinko, George. 0519

*Local conservancy districts*: Mendenhall,  
Howard. 0548*Mekong River, southeast Asia*

International cooperation: White, G. F. 1145

*Oregon*

Middle Willamette River basin: Oregon Water  
Resources Board. 1042

Umatilla River basin: Oregon Water  
Resources Board. 1041

*Role of small watersheds*: Brown, C. B. 0278*Seminar*

U.S. Army Corps of Engineers: U.S. Army.  
1391

*Snow cover relations*

California, Kings River: Court, Arnold. 0409

*Southeast River Basins*

U.S. Study Commission plan: U.S. Study  
Commission. 1102

- River-basin planning and development**
- Southeastern United States*
    - Land and water resources: Tomlinson, G. E. 1056
  - Upper Colorado River Commission*
    - Annual report: Upper Colorado River Commission. 1103
  - U.S. Senate hearings*
    - Act, 1964: U.S. Congress, Senate. 1084
  - Utah*
    - State water plan: Utah Water and Power Board. 1104
  - Water inventory*
    - Ohio, Scioto River basin: Ohio Division of Water. 0572
  - Watershed projects*
    - Hearings before U.S. House Subcommittee on Watershed development: U.S. Congress, House. 1049
- Rivers**
- Alluvial*
    - Mechanisms of turns: Carey, W. C. 036
  - Alluvial channels*
    - Classification: Schumm, S. A. 0924
  - Bed variations during flood*
    - Measurement: Ariizumi, Akira. 0963
  - Canada, Chalk River*
    - Emergency decontamination, preparations: Meservey, A. B. 0651
  - Channel changes*
    - Caused by flood-prevention structures: Bergman, D. L. 0117
  - Channel formation*
    - Shear distribution: Davidian, Jacob. 0159
  - Channel morphology*
    - Measurement techniques: Miller, J. P. 0666
  - Channel stability*
    - Cohesive soils, prediction methods: Flaxman, E. M. 0753
  - Chemical Composition*
    - Data compilation: Livingstone, D. A. 0497
  - Cooling*
    - Reservoir storage use: Kramer, H. A. 1243
  - Crooked, Oregon*
    - Geology for dam construction: U.S. Bureau of Reclamation. 1349
  - Development by international cooperation*
    - Mekong River, southeast Asia: White, G. F. 1145
  - Discharging into Great Salt Lake*
    - Dissolved salt contribution: Diaz, A. M. 0178
  - Drainage area*
    - Texas, San Antonio River basin: U.S. Geological Survey. 1093
  - Drainage pattern*
    - Empirical regularities: Roberts, M. C. 0725
  - Drought, severe*
    - Georgia, 1954: Thomson, M. T. 1050
  - Effluent*
    - Ground-water flow lines: Lehr, J. H. 0481
  - Estuarine meanders*
    - Global distribution: Ahnert, Frank. 058
  - Flood control, drainage development*
    - Illinois, Embarrass River: Illinois Division of Waterways. 1447
  - Rivers**
  - Flow nets*
    - Computer program: Falvey, H. T. 0628
  - Geochemistry*
    - Water and sediments: U.N. Econ. Comm. Asia Far East. 1065
  - Heat dissipation*
    - Energy-budget analysis: Messinger, Harry. 0653
  - International*
    - Industrial and agricultural use: Pan American Union. 1461
  - Irrigation*
    - Upper Colorado River Commission, Annual Report: Upper Colorado River Commission. 1103
  - Japan, Sorachi River*
    - Flow measurement with radioisotopes: Kato, Massao. 1416
  - Louisiana*
    - Hydrology: Page, L. V. 0585
  - Major, of the world*
    - Minor element content, implications: Durum, W. H. 0198
  - Meanders*
    - Effect of sediment composition of bed and banks: Kolb, C. R. 0387
  - Missouri*
    - Water resources engineering: Seedlock, R. F. 0883
  - Oregon*
    - South Coast Basin: Oregon Water Resources Board. 1040
  - Oregon, lower Columbia*
    - Environmental radiological survey: Toombs, G. L. 1368
  - Pesticides*
    - DDT and dieldrin: Breidenbach, A. W. 1340
  - Physical and chemical conditions*
    - Analysis, middle Mississippi River: Dorris, T. C. 0186
  - Pollution*
    - Federal controls: U.S. Congress, Senate. 1402
    - Self-purification, chemistry: Leclerc, E. 0478
    - Types of waste damage: McDermott, G. N. 1275
  - Pollution control*
    - United States: Atkins, C. H. 0066
  - Pollution control legislation*
    - Great Britain: Scott, G. T. G. 0879
  - Pollution dilution*
    - California, Lost River System: Woods, P. C. 1211
  - Potomac*
    - Quality of water data: Interstate Comm. Potomac River Basin. 1034
  - Precipitation of metals at confluence*
    - Colorado, Summit County, Deer Creek and Snake River: Theobald, P. K., Jr. 0961
  - Preservation in natural state*
    - Montana, Missouri River: U.S. Army Corps of Engineers. 1403
  - Public water supply*
    - Pollution, Europe and U.S.: Biemond, Cornelius. 0122

**Rivers**

- Quality, for water supply*
  - Taste and odor problems: DuByne, E. T. 0189
- Quality surveillance*
  - Electronic monitor system: Cleary, E. J. 0228
- Radionuclide transport*
  - Hydraulics: Kornegay, B. H. 1246
- Runoff data analysis*
  - Mathematical model: Tennessee Valley Authority. 1030
- Sediment*
  - Sources and transport: Wark, J. W. 1153
- Sedimentation*
  - Point bar deposits: Lane, D. W. 0291
  - Sediment-transporting characteristics: Zernial, G. A. 1230
- Sedimentation mechanics*
  - Bed configuration: Kennedy, J. F. 0365
- Shiawassee*
  - Michigan, water resources conditions and uses: Michigan Water Resources Commission. 1441
- Spiral flow phenomena*: Tanner, W. F. 1024
- Streambed percolation*
  - Water supply development: Rorabaugh, M. I. 0736
- Streamflow*
  - Unit hydrographs, principles and determinations: U.S. Army Corps of Engineers . 1071
- Streamflow, quantity and quality correlations*
  - Statistical analyses: Ward, J. C. 1150
- Streamflow related to evapotranspiration*
  - During long dry periods: Tschinkel, H. M. 1060
- Streamflow, related to precipitation*
  - Climatic fluctuation study: Yevdjevich, V. M. 1220
- Susquehanna, at Harrisburg*
  - Water-quality variations: Anderson, P. W. 0045
- United States*
  - Floods during 1958: U.S. Geological Survey. 1088
  - Floods during 1957: U.S. Geological Survey. 1490
- Unsteady flow computation*
  - Temporary water level method: Baczek, Maria. 0085
- Valley deposits*
  - Alluvial morphology: Pedersen, D. E. 0598
- Waste control*
  - Highly variable flow: Okun, D. A. 1268
- Waste disposal*
  - Irrigation return flow: Sylvester, R. O. 0677
- Water supply quality*
  - Taste and odor control: Erdei, J. F. 0223
- Water-quality variations*
  - Susquehanna River at Harrisburg: Anderson, P. W. 0045
- Water-shortage problems*
  - Rio Grande, upper: Hay, John. 0746
- White River, Washington*
  - Morphology and hydrology: Fahnestock, R. K. 0627

**Runoff**

- Annual means, reliability*
  - Length of record: Hidore, J. J. 0993
- Columbia River Basin, 1962*
  - Outcome of volume forecasts: Simons, W. D. 0968
- Comparative*
  - Grass and forest slopes: Walker, E. H. 1126
- Control*
  - Piedmont, southern: Hendrickson, B. H. 0938
  - Watershed protection: Landgren, N. E. 0290
- Data analysis*
  - Water yield model: Tennessee Valley Authority. 1030
- Desert flooding*
  - Alluvial fans: Beaty, C. B. 0102
- Dissolved salt*
  - Contribution to Great Salt Lake: Diaz, A. M. 0178
- Drought forecast*
  - Statistical method: Gumbel, E. J. 0794
- Effected by forest cutting*: Trimble, G. R., Jr. 1058
- Erosion control*
  - Logging rules: Wallis, J. R. 1129
- Estimation*
  - Small watersheds: Witherspoon, D. F. 1203
- Floods, Mississippi, 1960*
  - Rainfall and peak discharge data: Wilson, K. V. 1199
- Forecasting*
  - Columbia River Basin, 1962: Simons, W. D. 0968
  - Effect of soil moisture: Farnes, P. E. 1238
  - Short-cut methods: McCutchan, A. I. 0646
- Forecasting snowmelt*
  - California, Feather River Basin: Arvola, W. A. 1237
- Forest watersheds*
  - Effects of fire: Krammes, J. S. 1372
  - Effects of management: Reinhart, K. G. 0930
- Increase*
  - Vegetation removal: Rowe, P. B. 0839
- Increased water yield*
  - Brush to grass conversion: Hill, L. W. 0942
- Measurement*
  - At storm-water inlets: Knapp, J. W. 0381
- Minor element content*
  - Hydrologic implications: Durum, W. H. 0198
- Natural regulation*
  - Lake levels, Great Lakes: Bajurunas, L. 1282
- Peak rates, small watersheds*
  - Coefficient evaluation: Horn, D. L. 0693
- Precipitation relations*
  - Extrapolation of data: Christopoulos, C. 1499
  - Statistics: Matalas, N. C. 0533
  - Traced with fallout: Miyake, Y. 0964
  - Traced with fallout radiostrontium: Yamagata, N. 1412
- Rangeland*
  - Related to grazing: Rich, L. R. 0721
- Reduction*
  - Watershed research: Tennessee Valley Authority. 0952

**Runoff***Seasonal*

Related to cloud seeding: Elliot, R. D. 1404

*Sediment load*

Sampling and measurement: Replogle, J. A. 0719

*Snow melt*

Estimation: Rantz, S. E. 0707

*Storage, economics*

Irrigation use: Moore, C. V. 0415

*Watershed research*

North Carolina, western: Cooper, A. J. 0402

*Yearly variations*

United States, 1931-60: Busby, M. W. 0015

*Yield from watershed*

Management effects: Ogrinsky, H. O. 0571

**Saline water***Aquifer contamination*

Louisiana, Lake Charles area: Hodges, A. L., Jr. 1347

*Chemical characteristics*

Great Salt Lake: Hahl, D. C. 0743

*Chemistry*: Krieger, R. A. 0390*Concentration, subsurface formations*

Mechanism: Bredehoeft, J. D. 0270

*Conversion*

Bibliography: Kase, K. A. 1465

*Corrosion problems*: Fink, F. W. 0751*Determination in wells*

Gamma-ray spectroscopy: Caldwell, R. L. 0021

*Geothermal brine*

Mile-deep well: White, D. E., 1146

*Gulf coast salt marshes*

Management: Yarlett, L. L. 1217

*Industrial use*: Barlow, A. C. 0098*Irrigation*

Effect on soil chemistry: Batchelder, A. R. 0010

General principles for use: Kelley, W. P. 0361

Salt balance and leaching requirement:

Wilcox, L. V. 1194

Standards: Lunt, O. R. 1299

*Oil-field brines*

Ground-water contamination: Hopkins, H. T. 0690

*Origin of pore solutons*

Clay sediment compaction: Engelhardt, W. V. 0221

*Shallow depth in glacial soil*

Salt accumulation during irrigation:

vonSchaik, J. C. 1442

*Sodium sulphate*

Commercial production, west Texas: Reeves, C. C., Jr. 0716

*Subsurface salt deposits*

Symposium: Bersticker, A. C. 1355

*Utilization*

Study and mapping needed: Poole, J. L. 1481

**Saline-water conversion***California*

Activities in the State: Brice, D. B. 0273

*Developments in 1962*: American Water Works Association. 0078**Saline-water intrusion***California*

Point Mugu; Page, R. W. 0551

*Confined aquifer*

Gravitational convection and dispersion rates: Rumer, R. R., Jr. 0899

*Florida, southern*: Sherwood, C. B. 0889*Georgia and south Carolina, Savannah area*:

Counts, H. B. 0408

*Interaquifer connection*

Unplugged oil-test well: Wait, R. L. 1123

*Limited recharge*

Washington, Puget Sound area: Kimmel, G. E. 0368

*Louisiana*

Baton Rouge area: Morgan, C. O. 0419

Chicot aquifer: Whitman, H. M. 1443

**Measurement**

Electrical resistivity and conductivity: Ineson, J. 0687

*New Jersey Coastal Plain*

Chloride concentrations of well water: Seaber, P. R. 0882

*New Mexico*

Roswell basin: Hood, J. W. 0689

*New York*

Suffolk County, Montauk Point area: Perlmuter, N. M. 0600

Suffolk County, Southold area: Crandell, H. C. 0142

*New York, Long Island*

Nassau and southeastern Queens Counties: Perlmuter, N. M. 0599

*New York, western Long Island*: Swarzenski, W. V. 1019*Polder areas*

Africa, Lake Chad: Dieleman, P. J. 1405

*Sampling methods*

Coastal aquifers: Kohout, F. A. 0386

*Tidal caused*

Measurement: Ineson, J. 0687

*Tidal mixing*

Hydraulics, underground pool in a karst region: Smith, D. B. 1415

**Salt deposits***Symposium*: Bersticker, A. C. 1355**Salt-water-fresh-water relations***Ghyben-Herzberg principle*

An early American statement: Carlson, C. W. 0038

*Long Island, Centre Island*

Aquifer geology: Isbister, John. 0317

*Model studies, laboratory*

Gravitational convection and dispersion rates: Rumer, R. R., Jr. 0899

*New York*

Suffolk County, Montauk Point area: Perlmuter, N. M. 0600

**Sediment***Coastal waters*

Tracing with fluorescent materials: Bruun, Per. 1267

*Columbia River*

Radionuclide accumulation: Nielsen, J. M. 1250

**Sediment***Columbia River*

Seaward extent: Gross, M. G. 1323

*Composition of bed and banks, Mississippi River*

Effect on meanders: Kolb, C. R. 0387

*Earth manual*

U.S. Bureau Reclamation: U.S. Bureau of Reclamation. 1082

*Fine grained*

Pore volume change with overburden: Meade, R. H. 1440

*Fluvial*

Dispersal, radionuclide transport: Sayre, W. W. 1487

Sorption, release and transport, radionuclides: Kornegay, B. H. 1246

*Fluvial and lagoonal environments*

Radionuclide sorption and release: Clanton, U. S. 1239

Radionuclide sorption and release: Reynolds, T. D. 1251

*Fluvial discharge*

Measurement and analysis: U.S. Inter-Agency Comm. 1422

*Interstitial water*

Sampling techniques: Scholl, D. W. 0917

*Modern fluvial*

Mineralogy and exchange capacity: Kennedy, Vance. 1249

*Monitored in streams*

USGS network operation: Swenson, H. A. 1020

*Natural sand*

Moisture content: Prill, R. C. 0955

*Organic material*

River beds: Karr, W. V. 0355

*Particle size related to specific yield*

Humboldt River valley: Cohen, Philip. 0235

*Permeability, directional*

Sandstone: Potter, P. E. 0616

*Rivers*

Geochemical prospecting: U.N. Econ. Comm. Asia. 1065

*River-valley deposits*

Alluvial morphology: Pedersen, D. E. 0598

*Sand*

Transport measurement: Lean, G. H. 1417

*Sandstone*

Directional permeability: Potter, P. E. 0616

*Silty*

Pore volume related to load: Meade, R. H. 0542

*Small streams*

Southern Wisconsin: Collier, C. R. 0241

*Sources and transport*

Potomac River Basin: Wark, J. W. 1153

*Streams, Nova Scotia*

Copper, lead and zinc content: Holman, R. H. C. 0950

*Structures and fabrics*

Related to permeability: Mast, R. F. 0532

*Transport*

Geochemistry: Bradley, W. F. 1248

**Sedimentation***Aggrading conditions*

Bedding development: Jopling, A. V. 0350

*Alluvial channels*

Classification: Schumm, S. A. 0924

*Alluvial fans*

Competence of transport: Lustig, L. K. 0509

White Mountains, California and Nevada:

Beatty, C. B. 0102

*Analysis of suspended matter and emulsions*

Total reflectance infrared: Katlafsky, Bernard. 0357

*Bed configuration*

Mechanics: Kennedy, J. F. 0365

Ripple formation: Raudkivi, A. J. 0708

*Bed-load transportation*

Equations: Yalin, M. S. 1216

*Chemistry*

Effect on precipitation kinetics: Walton, A. G. 1133

*Clay-water suspensions*

Flow regime: Howard, C. D. D. 0695

*Coastal swamps*

Florida, southwestern: Scholl, D. W. 0918

*Coastal waters*

Tracing with fluorescent materials: Bruun, Per. 1267

*Computing effective shear*

Nomograph from known mean velocity:

Colby, B. R. 0239

*Control programs*

Potomac River Basin, Washington area: Guy, H. P. 0795

*Deltaic zone*

Hydraulics: Jopling, A. V. 0349

*Dynamics*

Interstitial fluid flow: Brandt, H. L. 0268

*Effect of forest cutting*

Trimble, G. R., Jr. 1058

*Erosion control*

Gully channel changes: Woolhiser, D. A. 1396

*Fine sand*

Transport: Collins, J. I. 0397

*Flood plain morphology*

Lower Missouri: Schmudde, T. H. 0916

*Flood-plain changes*

Kansas, Cimarron River: Schumm, S. A. 0922

*Flow conditions*

Inferred from sedimentary structures:

Sanders, J. E. 0903

*Flow measurement*

Circular orifice: Yotsukura, Nobuhiro. 1225

*Flow phenomena*

Viscosity and density effects: Simons, D. B. 0894

*Flume studies*

Aggrading conditions and bedding

development: Jopling, A. V. 0350

*Fluvial sediments*

Summary of source, transportation,

deposition, measurement: Colby, B. R. 0237

*Geochemistry of clays during transport*

Bradley, W. F. 1248

*Geological characteristics*

Freshwater environment: Hough, J. L. 1277

**Sedimentation**

- High-energy continental shelf environment:*
  - Creager, J. S. 0146
- Marine, coastal*
  - Columbia River sediment: Gross, M. G. 1323
- Mass transport*
  - Gravity waves: Collins, J. I. 0397
- Measurement and analysis*
  - Methods: U.S. Inter-Agency Comm. 1423
- Measuring and sampling equipment*
  - Runoff sediment load: Reogle, J. A. 0719
- Movement*
  - Traced with radioisotopes: Cummins, R. S. 0155
- Organic material*
  - River beds: Karr, W. V. 0355
- Particle movement*
  - Sand and pebbles: Moss, A. S. 0423
- Pebbles*
  - Transport and deposition: Johansson, C. E. 0332
- Point bar deposits*
  - Cross-stratification: Lane, D. W. 0291
- Potomac River Basin*
  - Reconnaissance study: Wark, J. W. 1152
- Radionuclide transport*
  - Hydraulics: Kornegay, B. H. 1246
- Radionuclide uptake and transport*
  - Stream sediments: Sayre, W. W. 0908
- Research*
  - U.S. Bureau Reclamation: U.S. Bureau of Reclamation. 1078
- Review of research, 1960-1963:* Wolman, M. G. 1206
- Rivers*
  - Spiral flow effects: Tanner, W. F. 1024
- Sand transport measurement*
  - Radioactive tracers: Lean, G. H. 1417
- Sandstone*
  - Sedimentary structures and sand shape fabrics: Potter, P. E. 0616
- Sediment discharge*
  - Determination: U.S. Inter-Agency Comm. 1422
  - Determination: Witzigman, F. S. 1463
- Sediment discharge determination*
  - Nomograph for approximation: Colby, B. R. 0238
- Sediment sampling*
  - Filter for use in small streams: Blocker, Wr. 0133
  - Methods and equipment: U.S. Inter-Agency Comm. 1422
  - Methods and equipment: Witzigman, F. S. 1463
- Sediment transport*
  - Alluvial fans: Lustig, L. K. 0509
  - Density currents: American Society of Civil Engineers. 0082
  - Fine sediment, flow phenomena: Simons, D. B. 0894
  - Preliminary study of parameters: Nordin, C. F., Jr. 0562
  - Sorbed radionuclides: Kaufman, W. J. 1252
  - Stream characteristics: Zernial, G. A. 1230

**Sedimentation**

- Sediment transport*
  - Suspended sediment: American Society of Civil Engineers. 0081
  - Vertical distribution: Nordin, C. F., Jr. 0561
- Sediment yields*
  - Streams in the United States: Swenson, H. A. 1303
- Sedimentary structures, primary*
  - Mechanics of deposition: Sanders, J. E. 0903
- Suspended sediment*
  - Effect on turbulent flow: Hino, Mikio. 1436
- Territory lake deposits*
  - Distribution, western United States: Feth, J. H. 0641
- Texas, Trinity River*
  - Garza-Little Elm Reservoir: U.S. Army Corps of Engineers. 1075
- Tidal inlets*
  - Flow patterns, channeling: Price, W. A. 0954
- Transport capability in erodible channels*
  - Use of Einstein bed-load function: Mao, Shieh-Wen. 0522
- Transport mechanics*
  - Dispersion: Sayre, W. W. 1487
- Watersheds, California*
  - Logging rules: Wallis, J. R. 1129
- Shenandoah Valley*
  - Water resources development: Interstate Comm. Potomac River Basin. 1438
- Snake River basin*
  - Floods*
    - Magnitude and frequency: Thomas, C. A. 0981
  - Surface-water records*
    - Streamflow and reservoir data, 1951-1960: U.S. Geological Survey. 1048
- Snow*
  - Accumulation measurement*
    - Radioactive fallout: Picciotto, E. 0609
  - Accumulation rate*
    - Function of extra-terrestrial dust: Langway, C. C., Jr. 0297
  - Antarctica, South Pole*
    - Surface energy budget: Lettau, H. H. 0488
  - Bibliography*: U.S. Army, CRREL. 1069
  - Dating, geochemical*
    - Antarctic: Vickers, W. W. 1117
  - Evaporation*
    - Factors: Peak, G. W. 1242
  - Evaporation suppression*
    - Hexadecanol: Anderson, H. W. 0083
  - Heat transfer by vapor transfer*: Yen, Yin-Chao. 1505
  - Heat-balance investigation*
    - Alpine snowfield: Ambach, W. 0063
  - Influence of soil temperature*
    - Canada, Ottawa: Gold, L. W. 0783
  - Management for water supply*
    - California: Anderson, H. W. 0047
  - Melt-runoff estimation*
    - North Yuba River basin, California: Rantz, S. E. 0707
  - Permeability*
    - Air flow rate: Yen, Yin-Chao. 1221

- Snow**
- Properties*
    - Physical, engineering, chemical: Kingery, W. D. 0371
  - Snow pack measurement*
    - Radioactive sources: Anderson, H. W. 0046
  - Snow samplers*
    - Comparison of 3 types: Beaumont, R. T. 0103
  - Streamflow forecasting*
    - California, Kings River basin: Court, Arnold. 0409
  - Thermal conductivity*: Yen, Yin-Chao. 1219
  - Thermal conductivity and diffusivity*
    - Mathematical derivation: Schwerdtfeger, Peter. 0877
  - Thickness*
    - Influence on frost penetration: Krinsley, D. B. 0391
  - Water vapor flux*
    - Energy transport model: Bergen, J. D. 0116
  - Western Snow Conference, 1963*
    - California: Western Snow Conference. 1241
- Soil conservation**
- Runoff reduction*
    - Watershed research: Tennessee Valley Authority. 0952
- Soil moisture**
- Agronomic practices*
    - Effect on soil moisture extraction: Dreibelbis, F. R. 0188
  - Atmospheric boundary layer*
    - Model study: Estoque, M. A. 0224
  - Characteristics*
    - Florida soils: Stewart, E. H. 0990
    - Georgia, coastal plain: Long, F. L. 0504
  - Chemistry*
    - Irrigation return flow: Sylvester, R. O. 0677
  - Conservation*
    - Conversion of vegetation: Pillsbury, A. F. 0611
    - Subsurface barriers and soil ridging: Willis, W. O. 1139
  - Depletion*
    - Evapotranspiration and deep percolation: Willardson, L. S. 0680
  - Diffusion*
    - Apparent diffusion coefficient, tritiated water: Nakayama, F. S. 0456
    - Validity of diffusion equation: Rawlins, S. L. 0712
  - Diffusivity*
    - Porosity relations: Jackson, R. D. 0321
    - Temperature relations: Jackson, R. D. 0320
  - Diffusivity-water content*
    - Relation to infiltration: Hanks, R. J. 0804
  - Drainage measurement*
    - Tension plate, measurement through time: Bruce, R. R. 0006
  - Evaporation*
    - Effect of soil surface conditions: Benoit, G. R. 0109
    - First drying stage, mathematical study: Covey, Winton. 0140
  - Soil moisture*
  - Evaporation reduction*
    - Surfactants, laboratory evaluation: Mistry, P. D. 0410
  - Hydraulic conductivity*
    - Measurement: Johnson, W. R. 0343
    - Rapid determination from soil cores: Bianchi, W. C. 0121
  - Infiltration*
    - Experiments for high school students: Harrold, L. L. 0818
  - Infiltration measurement*
    - Field method: Johnson, A. I. 0334
  - Influence on transpiration*: Gardner, W. R. 0768
  - Measurement*
    - Neutron method: vanBavel, C. H. M. 1147
    - Neutron method, effects of soil moisture interface: Lawless, G. P. 0304
    - Review of research, 1960-1963: vanBavel, C. H. M. 1105
  - Miscible displacement*
    - Diffusion and pore-water velocities: Nielsen, D. R. 0475
    - Exchange process: Biggar, J. W. 0123
  - Moisture and storage*
    - Teaching technique: Hobbs, J. A. 0935
  - Moisture retention*
    - Soil with coarse layers in profile: Miller, D. E. 0664
  - Movement*
    - Computer program for steady flow: Reisenauer, A. E. 1331
    - Free energy and pressure, effect of membranes: Kemper, W. D. 0363
    - Measurement by gamma-radiation attenuation: Davidson, J. M. 0161
    - Non-Darcy behavior: Swartzendruber, Dale. 0994
    - Pore structure relations: Corey, J. C. 0407
  - Movement and carbonate content*
    - Calculated on seasonal basis: Arkley, R. J. 0041
  - Movement, steady state*
    - Computer program for solving flow-problems: Reisenauer, A. E. 0718
  - Nonsteady-state flow simulator*
    - Two-dimensional electric: Hanks, R. J. 0805
  - Organic soil*
    - Water-table plots: Harrison, D. S. 0817
  - Permafrost*
    - Patterned ground: Black, R. F. 0130
  - Potential evapotranspiration*
    - Relations: Visser, W. C. 1118
  - Rangeland*
    - Effects of grazing: Rauzi, Frank. 0711
    - Related to grazing and fertilization: Rauzi, Frank. 0710
  - Research*
    - Water conservation: Olson, R. V. 1431
  - Retention and specific yield*
    - Prediction from subsoil cores: Perrier, E. R. 0604
  - Runoff forecasting*: Farnes, P. E. 1238

**Soil moisture**

*Soil sampling equipment*  
Undisturbed samples: Vasa, Jiri. 1114

*Soil-water relations*

Theory: Rubin, J. 0897

*Temperature effects*

Review of research, 1960-1963: Klute, A. 0380

*Tension-moisture content curves*

Southern Great Plains soils: Mathers, A. A. 0537

*Tracers*

Review of research, 1960-1963: Wallo, E. M. 1097

*Unsaturated flow*

Review of research, 1960-1963: Swartzendruber, Dale. 1018

*Water retention capacity*

Clay, kaolinite and montmorillonite: Thompson, L. A. 0989

*Wetting front*

Effects on reading of neutron moisture probes: Lawless, G. P. 0304

*Wetting front, temperature relations*

Activation energies for water movement: Anderson, D. M. 1467

Effects of initial water content: Anderson, D. M. 0049

**Soils***Aeration studies*

Oxygen-18 as a tracer: Jensen, C. R. 0329

*Bulk density measurement*

Gamma radiation attenuation: Davidson, J. M. 0161

*Cecil, southern Piedmont*

Runoff and erosion control: Hendrickson, B. H. 0938

*Compaction*

Measurement using hydraulic conductivity: Schmidt, Roy H. 0915

*Drainage*

California, Imperial Valley: Molof, J. J. 0414

Model study, application of theory of similitude: Ligon, J. T. 0494

*Earth manual*

U.S. Bureau Reclamation: U.S. Bureau of Reclamation. 1082

*Erodibility*

Evaluations on runoff and erosion stations: Olson, T. C. 0574

*Evaporation suppression*

Hexadecanol: Anderson, H. W. 0083

Surfactants, laboratory evaluation: Mistry, P. D. 0410

*Freezing and thawing*

Bibliography: Lunin, Jesse. 0507

*Geochemistry*

Radioisotopes in solution: Wilding, M. W. 1460

*Glacial till*

Saline ground water at shallow depths, irrigation problems: vonSchaik, J. C. 1442

*Heat transfer*: Carson, J. E. 0244*Humus*

Geochemistry: Swain, F. M. 0992

**Soils***Hydraulic conductivity*

Measurement: Johnson, W. R. 0343

*Malachite-azurite equilibrium*: Wayman, C. H. 1168*Mechanics*

Textbook: Means, R. E. 0543

*Moisture characteristics*

Florida: Stewart, E. H. 0990

Lower coastal plain: Long, F. L. 0504

*Physical properties*

Textbook: Means, R. E. 0543

*Radioactive fallout*

Behavior: Frere, M. H. 1322

*Radioactive ion movement*

Climatic effects: Richardson, R. M. 1319

*Radioactivity from weapons tests*

Related to permeability: Walton, Alan. 1132

*Retention of ABS*

Effect of biological slime: Ewing, B. B. 1240

*Sand*

Hydraulics, laminar and turbulent flow: Anandakrishnan, M. 0053

*Southern Great Plains*

Physical properties: Mathers, A. A. 0537

*Temperature*

Influence of snow cover: Gold, L. W. 0783

Variations with depth and time: Carson, J. E. 0244

*Water-saturated*

Pollution removal: Page, H. G. 0584

**South Africa***Water quality*

Survey of natural isotopes: Vogel, J. C. 0974

**South Carolina***Beaufort County*

Ground water: Counts, H. B. 0408

*Catawba River*

Quality control, pulp mill waste: Okun, D. A. 1268

*Coastal plain*

Soil-moisture characteristics: Long, F. L. 0504

*Jasper County*

Ground water: Counts, H. B. 0408

*Savannah area*

Ground water: Counts, H. B. 0408

*Savannah River area*

Radium in drinking water: Edgar, W. F. 1459

**South Dakota***Brown County, Claremont area*

Ground water: Baker, G. K. 0091

*Lake Dakota plain area*

Ground water: Hopkins, W. B. 0692

*Lincoln County, Beresford area*

Ground water: Baker, G. K. 0092

*Northeastern, Lake Dakota plain area*

Ground water: Hopkins, W. B. 0692

*Scotland area*

Ground water: Christensen, C. M. 0255

*Spink County, Redfield area*

Ground water: Christensen, C. M. 0256

*Union County, Beresford area*

Ground water: Baker, G. K. 0092

- South Dakota**
- Vermillion area*
    - Water supply: Bruce, R. L. 0005
  - Yankton County, Lesterville area*
    - Ground water: Rukstad, L. R. 0898
- Southeast River Basins**
- Water-resources development*
    - U.S. Study Commission plan: U.S. Study Commission. 1102
- Springs**
- Data*
    - California, lower Mojave Valley: Dyer, H. B. 0201
  - Domestic use*
    - Bacterial pollution: Heukelekian, H. 0941
  - Eastern Tennessee*: Sun, P-C. P. 1015
  - Geochemistry*
    - Chemical analyses, various types: White, D. E. 1401
  - Geology and hydrology*
    - New Mexico, Socorro Region: Hall, F. R. 0798
  - Limestone regions*
    - Mesopotamia, Ras-El-Ain: Burdon, D. J. 0011
  - Thermal*
    - Acidic, Japan, Tamagawa Spring: Ariizumi, A. 1411
    - Calcium content determination: Rowe, J. J. 0896
    - California, Agua Caliente, hydrology: Dutcher, L. C. 0200
    - Chemical analyses: White, D. E. 1401
    - Leasing of steam rights: U.S. Congress, Senate. 1086
    - Review of research, 1960-1963: White, D. E. 1185
  - Stock-water development**
    - Hydrology*
      - Idaho, southeastern: Hadley, R. F. 0796
      - Utah, western: Snyder, C. T. 0867
    - Pacific southwest*: Peterson, H. V. 0605  - Subsidence**
    - Artesian pressure decline*
      - Georgia, Savannah area: Davis, G. H. 1466
    - Fine-grained sediments*
      - Pore volume change with overburden: Meade, R. H. 1440
      - Pore volume related to load, particle size and sorting: Meade, R. H. 0542
    - Ground-water level decline*
      - Sediment compaction: Losgren, B. E. 0499
    - Peatlands*
      - Formation of ridges: Davis, G. H. 0168

**Sudan**

    - Kordofan Province*
      - Ground water: Rodis, H. G. 0734

**Surface water**

    - Detergent biodegradation*
      - Aerobic conditions: Wayman, C. H. 1169
    - Drainage patterns and landforms analysis*
      - Central Great Plains: Zakrzewska, Barbara. 1229
    - Flow resistance*
      - Bottom roughness: Mirajgaoker, A. G. 0645

**Surface water**

    - Ice formation*
      - Heat transfer coefficients, natural water surfaces: Williams, G. P. 1196
    - Limnology*
      - Textbook: Ruttner, Franz. 0902
    - Low-flow frequency curves*
      - Selected stations, Eastern United States: Hardison, C. H. 0809
    - Ohio streams*
      - Low-flow frequencies and storage requirements: Cross, W. P. 0151
    - Pollution*
      - Chemistry of self-purification: Leclerc, E. 0478
    - Pollution, biologic*
      - Alaska, Anchorage: Alaska Dept. of Health and Welfare. 0071
    - Quality for irrigation*
      - Western United States, 1959: U.S. Geological Survey. 1091
    - Radioactivity*
      - National Water Quality Network, monthly data: U.S. Public Health Service. 1096
    - Rainfall and streamflow*
      - Autocorrelation statistics: Matalas, N. C. 0534
    - Review of research, 1960-1963*
      - Report to IUGG: Johnson, E. A. 0338
    - River sediments*
      - Isotope ratios: Weber, J. N. 1172
    - Sedimentation and chemistry*
      - Potomac River Basin: Wark, J. W. 1152
    - Streamflow characteristics*
      - Relation to environment: Hely, A. G. 0749
    - Streamflow direction*
      - Drainage pattern: Morisawa, Maria. 0420
    - Streamflow forecasting*
      - Snow cover relations, California, Kings River basin: Court, Arnold. 0409
    - Streamflow related to evapotranspiration*
      - During long dry periods: Tschinkel, H. M. 1060
    - Streamflow related to precipitation*
      - Upper Colorado River: Marlatt, William. 1485
    - Supply and development*
      - Problems: Vandertulip, J. J. 1289
    - Tidal estuary*
      - Hydraulic geometry: Myrick, R. M. 0439
    - Water-supply characteristics*
      - Louisiana streams: Page, L. V. 0585

**Surface-water hydraulics**

    - Alluvial streams*
      - Mechanisms of turns: Carey, W. C. 0036
      - Regime criteria: Garde, R. J. 0742
    - Channel flow nets*
      - Computer program: Falvey, H. T. 0628
    - Computing maximum discharge*
      - Culvert and bridge design: Jarocki, Walentyn. 0326
    - Critical depth flume, theory and equations*
      - Temporary flow measurement, sewers and drains: Diskin, M. H. 0181

- Surface-water hydraulics**
- Flow retardance in canals*  
Channel weeds: Stephens, J. C. 0676
  - Fluid dynamics*: Frenkiel, F. N. 1311
  - Friction factors*  
Open-channel flow: American Society of Civil Engineers, 0080
  - Laminar flow*  
Stability: Yih, Chia-Shun. 1223
  - Rectangular channels*  
Shear distribution: Davidian, Jacob. 0159
  - Reservoir storage-outflow relation*  
Nonlinear: Shen, John. 1386
  - Sedimentation mechanics*  
Bed configuration: Kennedy, J. F. 0365
  - Sedimentation studies*  
Deltaic zone, origin of bedding: Jopling, A. V. 0349
  - Sediment-laden flow velocity*  
Measurement: Yotsukura, Nobuhiro. 1225
  - Spiral flow*  
Rivers, shallow seas, dust devils and models: Tanner, W. F. 1024
  - Streamflow velocity distribution*  
Effects on discharge coefficient: Ferron, A. G. 0637
  - Transients, open-channel flow*  
Handbook: Rich, G. R. 0722
  - Turbulent channel flow*  
Wall region: Tien, C. L. 1053
  - Turbulent dispersion*  
Open-channel flow: Yotsukura, Nobuhiro. 1260
  - Turbulent-diffusion equation*  
Analog solution: Shen, John. 0887
  - Surface-water quality**
    - Aquatic herbicide, 2, 4-D*  
Determination: Aly, O. M. 0062
    - Dissolved salts*  
Inflow to Great Salt Lake: Diaz, A. M. 0178
    - Major world rivers*  
Minor element content, implications: Durum, W. H. 0198
    - Mississippi River basins, lower*  
1958: U.S. Geological Survey. 1046
    - Precipitation of aluminum, iron, and manganese*  
Stream junction: Theobald, P. K., Jr. 0961
    - Radiation surveillance*  
Oregon, lower Columbia River: Toombs, G. L. 1368
    - River and lakes*  
Data compilation: Livingstone, D. A. 0497
    - River water reuse*  
Ohio River: Cleary, E. J. 0229
    - Streamflow statistics*  
Analyses, correlation: Ward, J. C. 1150
    - Sulfate and nitrate content*  
Precipitation derived: Gambell, A. W. 0767  - Surface-water techniques**
    - Aerial observation*  
Locating ground-water inflow to streams: Wiitala, S. W. 1191
    - Surface-water techniques*
      - Altimeter surveying*  
Simplified method: Newcome, Roy, Jr. 0470
      - Annual runoff means, reliability*  
Length of record: Hidore, J. J. 0993
      - Automation of streamflow records*  
Pilot computer program: Carter, R. W. 0248
      - Baseflow recession analysis*  
Ground-water discharge: Knisel, W. G., Jr. 1424
      - Channel flow nets*  
Computer program: Falvey, H. T. 0628
      - Current meter measurements*  
Accuracy: Carter, R. W. 1500
      - Curve preparation*  
Duration and frequency: Reiland, L. J. 0927
      - Direct measurement of shear*  
Floating-plate and knife-edge beam-balance: Davidian, Jacob. 0160
      - Discharge coefficient, pressure-differential meter*  
Velocity profile effects: Ferron, A. G. 0637
      - Electronic computers*  
Watershed research: Kelly, L. L. 0678
      - Energy-budget analysis, heated stream*  
Heat dissipation: Messinger, Harry. 0653
      - Engineering geology applications*  
Examples and discussion of methods: Travis, W. I. 1329
      - Erosion measurement*  
River channels and hill slopes: Miller, J. P. 0666
      - Flood probability*  
Based on short-term record extremes: Conover, W. J. 0401
      - Specific time intervals*: Hall, W. A. 0684
      - Flood routing*  
Estimation, channel storage coefficients: Brakensiek, D. L. 0266
      - Reexamination of equations of motion*: Henderson, F. M. 1498
      - Flow measurement*  
Irrigation furrows: Grover, B. L. 0793
      - Flow-duration curves*  
Estimation from low-flow measurements: Hunt, O. P. 0701
      - Hydrograph analysis*  
Watershed storage coefficient, derivation: Holtan, H. N. 0685
      - Lake depth measurement*  
Aerial photogrammetry: Moessner, K. E. 0412
      - Low-flow analysis*  
Statistical methods: Matalas, N. C. 0535
      - Low-flow measurements*  
Flow-duration curves: Hunt, O. P. 0701
      - Maximum discharge computations*  
Summary of methods: Jarocki, Walenty. 0326
      - Mean annual flood*  
Crest-stage gages: Frye, P. M. 0765
      - Model studies*  
Runoff data: Tennessee Valley Authority. 1030
      - Model studies, analog*  
Open-channel flow, turbulent-diffusion equation: Shen, John. 0887

**Surface-water techniques***Momentary discharge*

Tide-affected streams: Rantz, S. E. 0706

*Multiple regression*Peak discharge related to hydrologic factors:  
Benson, M. A. 0110*New instruments available:* Barron, E. G. 1326*Open-channel discharge measurements*

Use of radioisotopes: Timblin, L. O., Jr. 0971

*Peak discharge computations*

Culverts: Jenkins, C. T. 0328

*Peak-stage measurement*

Reservoirs: Mills, W. B. 0668

*Precipitation-runoff relations*

Traced with fallout: Miyake, Y. 0964

*Radiochemical tracing*

Columbia River: Nielsen, J. M. 1250

*Rating-curve extension*Comparison of Stevens and slope-conveyance  
methods: Sittner, W. T. 0847*Reservoir storage-outflow relation*

Nonlinear: Shen, John. 1386

*Reservoir temperature*

Computing average: Boyer, P. B. 1364

*River dilution and flow measurement*

Radioactive tracers: Kobayashi, M. 0960

*River flow measurement*

Radioisotope methods: Clayton, C. G. 1414

Radioisotope methods: Kato, Massao. 1416

*River-bed scouring, measurement*Gamma-ray density meter: Ariizumi, Akira  
0963*Runoff data analysis*Water yield model: Tennessee Valley  
Authority. 1030*Runoff estimation*

Graphical relations: Witherspoon, D. F. 1203

*Runoff forecasting*

Short-cut methods: McCutchan, A. I. 0646

*Runoff-precipitation relation*

Statistical analysis: Matalas, N. C. 0533

*Sampling and measurement*

Sediment-laden runoff: Repleglo, J. A. 0719

*Sediment discharge determination*Nomograph for approximation: Colby, B. R.  
0238*Sediment sampling*Filter for use in small streams: Blocker, Wras.  
0133*Sediment transport*

Computing effective shear: Colby, B. R. 0239

*Sedimentation*Equations for bed-load transportation: Yalin,  
M. S. 1216Measurement and analysis of sediment loads  
in streams: U.S. Inter-Agency Comm. 1422*Sedimentation laboratory study*Base-level changes and bedding development:  
Jopling, A. V. 0350Pebble transport and deposition: Johansson,  
C. E. 0332*Sediment-laden flow velocity*Measurement by means of circular orifice:  
Yotsukura, Nobuhiro. 1225**Surface-water techniques***Statistical methods*

Low-flow analysis: Matalas, N. C. 0535

Runoff-precipitation relation: Matalas, N. C.  
0533*Streamflow, record extension*

Statistical methods: Fiering, M. B. 0750

*Streamflow records, computation*

Digital computer: Kennedy, E. J. 0681

*Streamflow, statistical analyses*

Quality and quantity: Ward, J. C. 1150

*Temperature prediction*Current theories and studies: Zeller, Robert.  
1366*Temporary flow measurement, sewers and drains*Critical depth flume, theory and equations:  
Diskin, M. H. 0181*Tide-affected streams*Variation in velocity distribution: Craig, F. C.  
0141*Uniform flow in open channels*

Solving the equations: Pickard, W. F. 1497

*Unit hydrograph, design*

Small watersheds: Wu, I-Pai. 1214

*Unit hydrographs*

Principles and determinations: U.S. Army

Corps of Engineers . 1071

Properties: Henderson, F. M. 0837

*Unsteady flow computation, rivers*Temporary water level method: Baczek,  
Maria. 0085*Velocity distribution variations*

Tide-affected streams: Craig, F. C. 0141

*Water depths from aerial photos*Formula for correction factor: Tewinkel, G.  
C. 1032**Tennessee***Eastern*

Springs: Sun, P-C. P. 1015

*Ground-water levels, summary*

1952-61: Bingham, R. H. 0125

*Montgomery County*Ground water, for home supplies: Bingham,  
R. H. 0124**Tennessee Valley***Water resources*

Popular literature: Tennessee Valley

Authority. 0624

**Texas***Alice area*Ground-water availability from Goliad Sand:  
Mason, C. C. 0529*Bexar County*

Ground water: Arnow, Ted. 1341

*Brazos River basin*Ground-water reconnaissance: Cronin, J. G.  
0150Water quality data for reservoirs: Mendieta,  
H. B. 0647*Carizzo sand*

Ground water: Scalapino, R. A. 0909

*Central and south*Effects of drought, 1942-56: Thomas, H. E.  
0985

- Texas**
- Cochran County*  
Ground water: Rayner, F. A. 0715
  - Cypress Creek basin*  
Ground-water reconnaissance: Baker, E. T., Jr. 1457
  - Edwards County*  
Ground water: Long, A. T. 0503
  - Edwards Plateau*  
Effects of drought on ground water: Petitt, B. M., Jr. 0607
  - Elephant Butte-Fort Quitman area*  
Effects of drought on ground-water reservoirs: Conover, C. S. 0399
  - Fisher County*  
Ground-water quality: Burnitt, S. C. 0014
  - Floods*  
April-June 1957: Yost, I. D. 1224  
Magnitude and frequency: Patterson, J. L. 0592
  - Floods, annual peak*  
Hydrologic factors: Benson, M. A. 0110
  - Galveston County*  
Ground-water pumping and water-level changes, 1958-62: Anders, R. B. 0052
  - Gillespie County, Fredericksburg area*  
Ground water: Mount, J. R. 0428
  - Grayson County*  
Ground water: Baker, E. T., Jr. 0090
  - Ground water*  
Studies and needs: Klug, M. L. 0379
  - Ground-water supply*  
Management problems: Harden, R. W. 1290
  - Gulf Coast region*  
Ground-water reconnaissance: Wood, L. A. 1208  
Industrial water supplies: Meier, Wilbur. 0545
  - Hale County*  
Ground water: Cronin, J. G. 1488
  - Hall county*  
Soil properties: Mathers, A. A. 0537
  - Hays County*  
Ground water: DeCook, K. J. 0170
  - Hueco Bolson*  
Effects of drought on water resources: Hood, J. W. 0928
  - Leon County*  
Ground water: Peckham, R. C. 0597
  - Mesilla Valley, lower*  
Ground-water resources: Leggat, E. R. 0480
  - Neches River basin*  
Ground-water reconnaissance: Baker, B. B. 0088
  - Red River basin*  
Ground-water reconnaissance: Baker, E. T., Jr. 1457
  - Refugio County*  
Ground-water resources: Mason, C. C. 0530
  - Rio Grande basin*  
Summary of ground-water aquifers: Peckham, R. C. 0595
  - Sabine River basin*  
Ground-water reconnaissance: Baker, B. B. 0087
  - Texas**
  - San Antonio area*  
Ground-water data: Garza, Sergio. 0770  
Ground-water discharge from Edwards Limestone, 1955-62: Garza, Sergio. 0769
  - San Antonio River basin*  
Drainage areas of streams: U.S. Geological Survey. 1093
  - San Bernard River*  
Point bar deposit: Lane, D. W. 0291
  - San Jacinto coastal area*  
Streams, drainage areas: U.S. Geological Survey. 1094
  - Smith County*  
Ground water: Dillard, J. W. 0179
  - Soils*  
Physical properties: Mathers, A. A. 0537
  - Streams*  
Drainage areas: U.S. Geological Survey. 1094
  - Sulphur River basin*  
Ground-water reconnaissance: Baker, E. T., Jr. 1457
  - Surface water supply*  
Problems: Vandertulip, J. J. 1289
  - Surface-water quality*  
1961: Hughes, L. S. 0697
  - Surface-water reports*  
Bibliography: Mills, W. B. 0669
  - Terry County*  
Sodium sulphate production from natural brines: Reeves, C. C., Jr. 0716
  - Texas Water Commission*  
Publications list: Texas Water Commission. 1033
  - Trinity River*  
Sedimentation resurvey, Garza-Little Elm Reservoir: U.S. Army Corps of Engineers. 1075
  - Trinity River basin*  
Drainage areas: U.S. Geological Survey. 1094  
Ground-water reconnaissance: Peckham, R. C. 0596
  - Well samples and cores*  
Index: Morey, P. S. 0417
  - Tracers**
  - Carbon isotopes*  
Ground-water age and movement: Vogel, J. C. 0959
  - Chromium-51-EDTA and tritium*  
Ground-water flow: Knutsson, G. 1413
  - Fluorescent materials*  
Sediment movement in coastal waters: Bruun, Per. 1267
  - Ground-water flow timing*  
Affected by hydrologic phenomena: Theis, C. V. 1420
  - Injection techniques*  
Effect on spread of tracers in ground water: Ogata, Akio. 0570
  - Oxygen-18*  
Soil aeration studies: Jensen, C. R. 0329
  - Phosphates*  
Recharge pits: Sampayo, F. F. 0840

- Tracers**
- Radioactive*
    - River dilution and flow measurement: Kobayashi, M. 0960
    - Sediment movement, rivers and harbors: Cummins, R. S. 0155
    - Use in hydrology: International Atomic Energy Agency. 0970
  - Radioactinium and radiostrontium fallout*
    - Precipitation-runoff relations: Miyake, Y. 0964
  - Radioisotopes*
    - Evaluating arrival time: Nelson, R. W. 1419
    - Ground-water flow measurement: Moser, H. 0958
    - Ground-water stratification: Iwai, S. 0972
    - Hydraulics, underground pool in a karst region: Smith, D. B. 1415
    - Infiltrating hot spring water: Ariizumi, A. 1411
    - Open-channel flow measurement: Timblin, L. O., Jr. 0971
    - River flow measurement: Kato, Massao. 1416
    - River flow measurement methods: Clayton, C. G. 1414
    - Sand transport measurement: Lean, G. H. 1417
    - Use in ground-water hydrology: Nelson, R. W. 1419
    - Use in ground-water research: Harpaz, Y. 1418
    - Water supply applications: Feely, H. W. 0634
  - Soil water movement*
    - Review of research, 1960-1963: Wallo, E. M. 1097
  - Temperature*
    - Recharge pits: Sampayo, F. F. 0840
  - Tritium*
    - Karst ground-water movement: Burdon, D. J. 1410
    - Precipitation recharge to springs: Holmes, C. R. 0951
    - Soil moisture diffusion: Nakayama, F. S. 0456
    - Underground fusion explosions: Stead, F. W. 0997
  - Transpiration*
    - Measurement*
      - Heat pulse velocity meter: Skau, C. M. 0848
    - Review of research*
      - 1960-1963: Roberts, W. J. 0726
    - Soil water influences*: Gardner, W. R. 0768
  - United Nations**
    - Conference, natural resources*
      - Water-resources development: U.N., Office Secretary-General. 1068
    - Conference, Water-resources development*
      - Asia, Far East: U.N. Econ. Comm. Asia Far East. 1236
  - United States**
    - Artificial recharge*
      - Operations in 26 states: American Water Works Association. 0074
    - United States**
      - Eastern*
        - Low-flow frequency curves for selected gaging stations: Hardison, C. H. 0809
      - Floods during 1957*
        - Description and data: U.S. Geological Survey. 1490
        - Description, precipitation and streamflow data: U.S. Geological Survey. 1088
      - Hydraulic research, 1963*: Middleton, H. K. 0662
      - Irrigation*
        - Irrigated acreage, 1962: Irrigation Engineering and Maintenance. 0316
      - National water situation*
        - Role of ground water: McGuinness, C. L. 1483
      - Northwestern*
        - Ground-water levels, 1956-60: U.S. Geological Survey. 1089
      - Pacific Northwest*
        - Hydrologic data collection program: Columbia Basin Inter-Agency Comm. 1501
        - Surface-water records, 1951-60: U.S. Geological Survey. 1392
      - Pollution control*
        - Status, 1963: Atkins, C. H. 0066
      - Radioactivity in drinking water, 1961*
        - USPHS Analysis Program: U.S. Public Health Service. 1095
      - Radioactivity in raw surface water*
        - National Water Quality Network, monthly data: U.S. Public Health Service. 1096
      - Radioactivity in surface water*
        - Review of data, 1957-1962: Weaver, Leo. 1171
      - Radiostrontium in tap water*
        - July-Dec. 1962: U.S. Atomic Energy Commission. 1077
        - March-June 1962: U.S. Atomic Energy Commission. 1076
      - Rivers, city water supply*
        - Pollution problems: Biemond, Cornelius. 0122
      - Runoff*
        - Yearly variations, 1931-60: Busby, M. W. 0015
      - Saline-water resources*
        - General description: Poole, J. L. 1481
      - Sedimentation*
        - Sediment yield of streams: Swenson, H. A. 1303
      - Snake River Basin*
        - Surface-water records, 1951-1960: U.S. Geological Survey. 1048
      - Southeast River Basins*
        - Land and water resources development plan: U.S. Study Commission. 1102
      - Southeastern*
        - River basin development: Tomlinson, G. E. 1056
      - Southwest*
        - Effects of drought, 1942-56: Thomas, H. E. 0986
      - Southwest, basins of interior drainage*
        - Effects of drought, 1942-56: Thomas, H. E. 0962

**United States***Southwestern*

- Aridity, AAAS Symposium: Hodge, Carle, 0948  
 Convective storm patterns: Osborn H. R. 0577  
 Ground-water levels, 1956-60: U.S. Geological Survey, 1090

*The Great Basin*

- Surface-water records, 1951-1960: U.S. Geological Survey, 1092

*Water law*

- Federal-State problems: Goodcell, R. B., Jr. 0785

*Water law, western*

- Federal-State conflicts: Taylor, E. F. 1025

*Water quality networks, USGS*

- Purpose and operation: Swenson, H. A. 1020

*Water resources*

- Ground-water utilization: Koenig, Louis. 0385

*Water resources research*

- Federal agencies: Federal Council, Sci. and Technology, 1444

*Water-supply development*

- Lessons for emerging countries: Wolman, Abel. 1148

*Water-resources management*

- Planning, status 1963: Wolman, Abel. 1205

*Western*

- Floods, Dec. 1955-Jan. 1956, description: Hofmann, Walter. 1320

- Floods, Dec. 1955-Jan. 1956, streamflow data: Hofmann, Walter. 1321

- Irrigation-water quality for 1959: U.S.

- Geological Survey, 1091

- Tertiary lake deposits: Feth, J. H. 0641

*Western water law*

- Public supply liability: Taylor, E. F. 1026

*Western waters*

- Federal power: Morreale, Eva H. 0421

**Upper Colorado River Commission***Annual Report, 1963*

- Water management: Upper Colorado River Commission, 1103

**U.S. Dept. of Interior***History and functions*

- Dams, rangeland and wildlife: Terrell, J. U. 1031

**U.S.S.R.***Average climatic water balance data*: Mather, J. R. 1425**Utah***Beaver County*

- Ground-water data: Sandberg, G. W. 1433

*Beaver Valley*

- Ground-water data: Sandberg, G. W. 1433

*Bryce Canyon National Park*

- Ground water: Marine, I. W. 0523

*Cedar City Valley*

- Effects of drought on water resources: Waite, H. A. 1124

- Ground-water data: Sandberg, G. W. 1433

**Utah***East Shore area*

- Ground water: Smith, Ralph E. 0859

*Escalante Valley*

- Effects of drought on water resources: Nelson, W. B. 0463

*Ground-water data*: Sandberg, G. W. 1433

*Great Salt Lake*

Dissolved-mineral inflow, selected data: Hahl, D. C. 0743

Dissolved-salt inflow: Diaz, A. M. 0178

*Iron County*

Ground-water data: Sandberg, G. W. 1433

*Jordan Valley*

Ground-water data: Marine, I. W. 0524

*Millard County, Escalante Valley*

Ground-water data: Sandberg, G. W. 1433

*Millard County, Pavant Valley*

Hydrologic data: Mower, R. W. 0430

*Navajo Indian Reservation*

Ground-water quality: Kister, L. R. 0376

Ground-water supply data: Davis, G. E. 0165

*Pavant Valley*

Hydrologic data: Mower, R. W. 0430

*Piute County, central Sevier Valley*

Ground-water data: Carpenter, C. H. 0039

*Salt Lake County, Jordan Valley*

Ground-water data: Marine, I. W. 0524

*Sanpete County, central Sevier Valley*

Ground-water data: Carpenter, C. H. 0039

*Sevier County, central Sevier Valley*

Ground-water data: Carpenter, C. H. 0039

*Sevier Valley, central*

Ground-water data: Carpenter, C. H. 0039

*Tooele County, Middle Canyon*

Hydrogeology: Gates, J. S. 0771

*Tooele County, Tooele Valley*

Hydrologic data: Gates, J. S. 0772

*Water management*: Clyde, G. D. 0232

*Water resources*

Problems and needs: Utah Water and Power Board, 1104

*Weber County, Ogden Valley*

Artesian aquifer: Thomas H. E. 1506

*Western*

Stock-water development: Snyder, C. T. 0867

**Vegetation**

*Aquatic*

Removal of lead from tap water: Oborn, E. T. 0566

*Rangeland*

Water intake relationships: Rauzi, Frank. 0710

*Relation to ground water*

Fracture traces: Burnett, J. L. 1339

*Removal in watershed*

Streamflow increase: Rowe, P. B. 0839

**Venezuela**

*Valencia Lake*

Use as a hydrologic indicator: Gschwendtner, J. V. G. 0744

**Virgin Islands**

*St. Croix*

Ground water: Hendrickson, G. E. 0939

- Virginia**
- Alexandria area*
    - Tidal estuary, hydraulic geometry: Myrick, R. M. 0439
  - Precipitation*
    - Sulfate and nitrate content: Gambell, A. W. 0767
  - Volcanic-rock hydrology**
    - Artesian conditions*
      - Hawaii, Oahu Island: Mink, J. F. 0671
    - Ground water*
      - Columbia River basalt: Foxworthy, B. L. 0758
    - Islands*
      - American Samoa: Davis, D. A. 0163
  - Washington**
    - Chief Joseph Dam Project, Chelan Division*
      - Reevaluation statement, U.S. Bureau  
Reclamation: U.S. Bureau of Reclamation. 1079
    - Columbia Basin Project*
      - Merits of irrigation program: Mancinko, George. 0519
    - Columbia River, lower*
      - Cooperative water-quality survey: Deery, H. A. 1264
    - Columbia River sediment*
      - Radioactivity: Gross, M. G. 1323
    - King County, northwestern*
      - Ground water: Liesch, B. A., 0493
    - Mount Rainier*
      - Morphology and hydrology of a glacial stream: Fahnestock, R. K. 0627
    - Puget Sound area*
      - Saline-water intrusion: Kimmel, G. E. 0368
    - Seattle water supply*
      - Cedar River Watershed management:  
Thompson, A. E. 0988
      - Cedar River Watershed, multiple use controversy: Heath, J. R. 0830
    - Takoma area*
      - Aquifers, highly productive: Walters, K. L. 1099
    - Water-supply management*
      - Quality-control program: Towne, W. W. 1265
    - Whitman County, Pullman area*
      - Ground water: Foxworthy, B. L. 0758
    - Yakima Project, Kennewick Division extension*
      - Reevaluation statement, U.S. Bureau  
Reclamation: U.S. Bureau of Reclamation. 1080
    - Yakima River Basin*
      - Irrigation return flow study, water quality:  
Sylvester, R. O. 0677
      - Streamflow, effects of hydraulic and geologic factors: Kinnison, H. B. 0373
    - Waste disposal**
      - ABS<sup>33</sup>*
        - Adsorption on kaolinite: Wayman, C. H. 1166
      - ABS, dissolved solids, and bacteria*
        - Water-saturated soils: Page, H. G. 0584
      - Detergent biodegradation*
        - Aerobic and anaerobic conditions: Wayman, C. H. 1165
      - Waste disposal**
        - Detergent biodegradation*
          - Aerobic and anaerobic conditions: Wayman, C. H. 1169
        - Detergent effects*
          - Viscosity of clay-water suspensions: Wayman, C. H. 1162
        - Detergents*
          - Federal controls; U.S. Congress, Senate. 1402
          - Orsanco detergent subcommittee report:  
Orsanco Detergent Subcommittee. 0575
          - Retention in soils: Ewing, B. B. 1240
          - Water supply contamination: Payne, W. J. 1037
        - Detergents, commercial fertilizers*
          - Pollution control: Meier, E. B. 0544
        - Dictionary*
          - German, English, French, Italian: Meinck, Fritz. 0546
        - Guide to construction*
          - Rural systems: Anderson, E. P. 1325
        - Industrial*
          - Conference, 17th, 1962: Purdue University. 1263
        - Inorganic wastes*
          - Deep wells, Indiana, Newport: Hundley, C. L. 0699
        - Irrigation return flow*
          - Washington, Yakima River Basin: Sylvester, R. O. 0677
        - Literature review, 1962*: Okun, D. A. 0573
        - Management*
          - River inflow and dilution: Woods, P. C. 1211
        - Mississippi River*
          - Water-quality surveillance program:  
Schroepfer, G. J. 0920
        - Paper and paperboard mills*
          - Pollution prevention: Masselli, J. W. 0531
        - Paper industry*
          - Lower Columbia River: Deery, H. A. 1264
        - Pollution control*
          - Status, United States: Atkins, C. H. 0066
        - Pulp mill*
          - South Carolina, Catawba River: Okun, D. A. 1268
        - Radioactive*
          - Dispersion factors: Beckman, G. E. 1458
          - Dispersion studies: Skibitzke, H. E., 0850
          - Earth materials: Richardson, R. M. 1319
          - Economic decision making model: Spofford, W. O., Jr. 1262
          - Estuarine transport, sorbed radionuclides:  
Kaufman, W. J. 1252
          - Fresh water: International Atomic Energy Agency. 0314
          - Management: Belter, W. G. 0107
          - Management: Bernard, Harold. 1269
          - Movement through earth materials: Wilding, M. W. 1460
          - Pollution control standards and practice:  
Tsivoglou, E. C. 1047
          - Reduction by coagulent and settling: Silker, W. B. 1474

**Waste disposal***Radioactive*

Surface-water hydraulics: Kornegay, B. H. 1246

Uptake and transport by stream sediments: Sayre, W. W. 0908

Uraniun milling industry: Tsivoglou, E. C. 1061

*Radioactive, liquid*

Management in U.S.: Belter, W. G. 0108

*Radioactivity decontamination*

Calcium-ferric phosphate process: Frost, C. R. 0740

*Re-use of industrial water*: Internat. Union Pure. 1398*Self-purification of fresh water streams*: Leclerc, E. 0478*Sewage treatment*

Bibliography, selected biological: Ingram, W. M. 0312

*Tracing*

Radioisotopes: Feely, H. W. 0634

*Treatment*

Ecology: Hawkes, H. A. 0828

Research and Federal control: U.S. Congress, Senate. 1402

*Waste of different types*

Predicting potential pollution: McDermott, G. N. 1275

**Water***Agricultural utilization problems*

Need for education: Revelle, Roger. 0720

*Arid west*

Energy sources: Schufle, J. A. 0621

*California*

Publication of State agencies: Johnson, J. W. 1437

*Characteristics*

Resource administration: Bower, B. T. 0263

*Chemistry*

Hydrogen ion buffering: Weber, W. J., Jr. 1173

*Color, organic*

Chemical and physical properties: Black, A. P. 0127

*Compressibility*

Measurement by sonic velocities: Eklund, Henning. 0209

*Earth, summary*: Nace, R. L. 0454*Ecology of fresh water*: Macan, T. T. 0514*Famine*

Fictitious: Kinney, J. E. 0372

*Geochemistry*

Chemical analyses, subsurface water, different geological environments: White, D. E. 1401

*Global*

Nontechnical description: Nace, R. L. 0454

*Importance as natural resource*

Popular literature: Sollers, A. A. 0623

*Temperature*

At maximum density: Eklund, Henning. 0209

*United States*

Needs and supply: Cliff, E. P. 0230

Summary and problems: Robinove, C. J. 1067

**Water***Value for domestic use*

Demographic and socioeconomic variables: Dunn, D. F. 0192

*Viscosity*

Effect of detergents: Wayman, C. H. 1162

**Water analysis***Aquatic herbicides*

2, 4-D: Aly, O. M. 0062

*Bacteria chemistry*

Actinomycete metabolites: Morris, R. L. 0422

*Bacterial*

Sampling techniques: Noble, R. E. 1429

*Missouri River water*

Organic pollutants, taste, odor: Erdei, J. F. 0223

*Polyacrylamides, traces*: Crummett, W. B. 0153*Taste and odor*

Detergent, ABS: Cohen, J. M. 0234

**Zinc in natural waters**

Evaluation of procedures: O'Connor, J. T. 0569

**Water budget***Arid regions*

Arizona: Thomsen, B. W. 1400

*Artesian aquifer*

Utah, Weber County, Ogden Valley: Thomas, H. E. 1506

*Florida*

Brooklyn Lake: Clark, W. E. 0226

*Glacial basin*

Instrumentation: Tangborn, W. V. 1023

*Idaho, Little Lost River basin*: Mundorff, M. J. 0433*San Pedro River valley, Arizona*: Page, H. G. 0583*Watershed studies*

Computer use: Kelly, L. L. 0678

**Water conservation***Artificial recharge*

United States, projects in operation: American Water Works Association. 0074

*Canada*

Authorities: Lord, G. R. 0505

*Colorado, lower Arkansas River valley*

Phreatophyte study: Bittinger, M. W. 1301

*Conference, United Nations*: U.N., Office

Secretary-General. 1068

*Gulf coast salt marshes*: Yarlett, L. L. 1217*Irrigation water management*: Quakenbush, T. H. 0702*Kansas*

Evaporation control: Olson, R. V. 1431

*Land and water management*: Thorne, Wynne. 1052*Land-surface treatment*

Impervious films and asphalt compounds:

Myers, L. E. 1371

*Ohio*: Harrold, L. L. 0819*Principles of water supply economics*: DeHaven, J. C. 0171*Range management*: Anderson, E. W. 0048*Research*: Meyers, L. E. 0656

U.S. Bureau Reclamation: U.S. Bureau of Reclamation. 1078

**Water conservation**

- Re-use of water in industry:* Internat. Union Pure, 1398  
*Run off storage*  
 Irrigation use: Moore, C. V. 0415  
*United States:* Cliff, E. P. 0230  
*United States, planning*  
 Research needs: Wolman, Abel. 1205  
*Water-surface treatment*  
 Monomolecular films: Myers, L. E. 1371

**Water law**

- Arkansas:* Mack, L. E. 0515  
*Design*  
 Irrigation, State rights: Jones, D. S., Jr. 0345

*Eastern United States:* Ellis, H. H. 0217

*Economics*

Conference: Hall, W. A. 1337

*Federal legislation:* Eaton, E. D. 1294  
 Teague, Hon. O. E. 1293

*Federal power*

Western waters: Morreale, Eva H. 0421

*Federal-State rights problems*

California, Feather River Project Association:  
 Goodcell, R. B., Jr. 0785

*Great Britain*

Pollution and supply legislation: Scott, G. T.  
 G. 0879

*Hawaii*

Hamakua-Kohala water study: Hawaii Div.  
 of Water and Land Devel. 0827

*International*

Conference, United Nations: U.N., Office  
 Secretary-General. 1068

*International rivers and lakes*

Industrial and agricultural use: Pan American  
 Union. 1461

*Legislation in Denmark:* Christensen, Wilfred.  
 0257

*Michigan*

Ground-water contamination: Deutsch,  
 Morris. 0174

*Pollution and contamination*

California: McKee, J. E. 0447

*Pollution control*

Federal politics: Langer, Elinor. 0296

General discussion: Walton, Graham. 1134

*Pollution control legislation*

Detergents: American Water Works  
 Association. 0075

*Problems*

Texas: Bouldin, V. W. 1286

*Public water supply*

Utility liability: Taylor; E. F. 1026

*Thermal springs*

Leasing of steam rights: U.S. Congress,  
 Senate. 1086

*Trends:* DeHaven, J. C. 0171*United States, western*

Federal-State conflicts: Taylor, E. F. 1025

*Well construction and pump installations:*

Calabresa, T. A. 0020

**Water management***Agricultural problems*

Need for education: Revelle, Roger. 0720

**Water management***Agricultural watersheds*

Planning engineering programs: Francis, C. J.  
 0759

*Arid regions*

AAAS Symposium: Hodge, Carle. 0948

*Artificial recharge*

Basin design, operation: American Water  
 Works Association. 0073

United States, projects in operation:  
 American Water Works Association. 0074

*California, Lost River System*

Pollutant inflow and dilution: Woods, P. C.  
 1211

*Canada*

Water conservation authorities: Lord, G. R.  
 0505

*Characteristics of water*

Physical, technological and economic: Bower,  
 B. T. 0263

*Colorado State Univ. water resource program:*

Morgan, W. E. 1287

*Conference, United Nations*

Science and technology for development:  
 U.N., Office Secretary-General. 1068

*Economic analysis*

Philosophy and methods: Ciriacy-Wantrap,  
 S. V. 0259

*Economic evaluation*

California: Lofting, E. M. 0500

*Economics*

Conference: Hall, W. A. 1337

*Economics research*

California: Tolley, G. S. 1336

*Effects*

Arkansas Valley, La Junta to Las Animas:  
 Moulder, E. A. 0427

*Federal-State water rights*

Problems and proposals: Goodcell, R. B., Jr.  
 0785

*Ground water*

Problems: Harden, R. W. 1290

*Ground-water basins*

Proceedings of conference, 1963: Schiff,  
 Leonard. 1358

*Ground-water—surface-water relations*

Optional utilization, reservoirs and aquifers:  
 Buras, Nathan. 0010

*Hydrology and water needs*

Hawaii, Oahu Island water plan: Mink, J. F.  
 0671

*Institutional programs*: Smith, R. L. 1288*Irrigation*: Quakenbush, T. H. 0702

Salt balance and leaching requirements:  
 Wilcox, L. V. 1194

*Irrigation practice*

Effecting surface-water quality: U.S. Public  
 Health Service. 1100

*Land and water use*: Thorne, Wynne. 1052*Multi-purpose reservoirs*

Flood control operation: Beard, L. R. 0101

Water-supply planning: Haywood, R. W., Jr.  
 0829

- Water management**
- Ohio River*
    - Industrial and municipal reuse: Cleary, E. J. 0229
  - Pacific northwest*
    - History and development of regional planning: Bessey, R. F. 1357
  - Planning*
    - New York State: New York Temporary State Comm. 1304
  - Politics*
    - Arizona: Mann, D. E. 0520
  - Potomac River basin*
    - Need for total planning: Johnson, C. J. 0336
  - Recreation*
    - Seattle, Cedar River Watershed: Heath, J. R. 0830
  - Research*
    - United States: Wolman, Abel. 1205
  - River pollution*
    - Inflow and dilution: Woods, P. C. 1211
  - Scientist's contribution*: Oeming, L. F. 1278
  - Snow zone lands*
    - California: Anderson, H. W. 0047
  - Supply development, United States*
    - Lessons for emerging countries: Wolman, Abel. 1148
  - Temperature control*: Sylvester, R. O. 1362
  - Tennessee Valley Authority*
    - Popular literature: Tennessee Valley Authority. 0624
  - Utah*: Clyde, G. D. 0232
  - Valley-wide planning*
    - California, Central Valley: Thomas, H. E. 0620
  - Watersheds*
    - Development by conservancy districts: Mendenhall, Howard. 0548
  - Water-shortage problems*
    - Rio Grande, upper: Hay, John. 0746
  - Water research**
    - Information retrieval*
      - Water supply and pollution control: Faber, H. A. 0626  - Water resources**
    - Administration*
      - Biologist's role: Renn, C. E. 1280
    - Asia and Far East*
      - UNECAFE Conference: U.N. Econ. Comm. Asia Far East. 1236
    - California*
      - State Water Project: MacRostie, Wayne. 0452
    - Conference, United Nations*: U.N., Office Secretary-General. 1068
    - Development*
      - New England: Sterling, C. I., Jr. 1473
      - Potomac Valley: Interstate Comm. Potomac River Basin. 1438
    - Economics*
      - Ground-water storage utilization: Vaseen, V. A. 1115
    - Federal legislation*: Eaton, E. D. 1294
    - Teague, Hon. O. E. 1293

**Water resources***Missouri Basin*

U.S. Corps of Engineers program: Seedlock, R. F. 0883

*National*

Evaluation: Kinney, J. E. 0372

*National problems*

Research necessary: Kneese, A. V. 1284

*Planning*

New York, Rockland County: Ayer, G. R. 0067

Southeastern U.S. river basins: Tomlinson, G. E. 1056

*Planning, social and legal problems*

Texas: Bouldin, V. W. 1286

*Pollution*

Detergents, commercial fertilizers: Meier, E. B. 0544

*Precipitation research*

Illinois, southern: Changnon, S. A., Jr. 1035

*Problems and policies*

Recreational use: Clawson, Marion. 0227

*Research*: Quill, L. L. 0703

Federal activities: Federal Council, Sci. and Technology. 1446

*Research and development*

U.S. Government agencies: Federal Council, Sci. and Technology. 1444

*Research, federal*

Coordination: Revelle, Roger. 0932

*Southeast River Basins*

U.S. Study Commission plan: U.S. Study Commission. 1102

*Techniques*

Compilation of short papers: Mesnier, G. N. 0652

*United States*

Ground-water utilization: Koenig, Louis. 0385

*United States. management*

Planning, status 1963: Wolman, Abel. 1205

*Urban watersheds*

Management: Wheeler, G. E., Jr. 1394

*Utah*

State water plan: Utah Water and Power Board. 1104

*Water quality management*

Kansas: Metzler, D. F. 0654

*World-wide*

Engineering: Princeton University. 1482

*Yield prediction*

Project yield by probability method: Maughan, W. D. 0538

**Water supply***Administration*

Political and economic considerations: Bower, B. T. 0263

*After nuclear attack*: Soule, R. M. 1435*Canada, Alberta*

Ground water, estimation: Jones, J. F. 0346

*Conservation*

Watershed-management effects: Ogrosky, H. O. 0571

- Water supply**
- Contamination*
    - Detergents: Orsanco Detergent Subcommittee. 0575
    - Fuel oil: Noll, D. C. 0559
  - Development in United States*
    - Lessons applicable to emerging countries: Wolman, Abel. 1148
  - Dictionary*
    - German, English, French, Italian: Meinck, Fritz. 0546
  - Economic principles*
    - Application: DeHaven, J. C. 0171
  - Emergency*
    - Ground water, Colorado: Voegeli, P. T., Sr. 1119
  - Federal-State rights*
    - Problems and proposals: Goodcell, R. B., Jr. 0785
  - Fluoridated*
    - New systems, U.S. and Canada, 1961: American Water Works Association. 0077
  - Fluoridation*
    - AWWA policy statement: American Water Works Association. 0076
  - Fluoride determination*
    - Radiotracer method: Moore, F. L. 0416
  - Ground water*
    - Management problems: Harden, R. W. 1290
    - Northeastern Illinois: Knowles, D. B. 0383
    - Utilization: Koenig, Louis. 0385
  - Guide to construction*
    - Rural systems: Anderson, E. P. 1325
  - Illinois*
    - Mineral content: Larsen, T. E. 0300
  - Industrial*
    - Re-use of waste water: Internat. Union Pure. 1398
  - Investigations*
    - State-Federal coordination: Kinney, J. E. 0372
  - Irrigation*
    - Stream runoff storage: Moore, C. V. 0415
  - Kansas, Wichita*
    - Aquifer test procedure: Stramel, G. J. 1013
  - Laws*
    - Eastern United States: Ellis, H. H. 0217
  - Louisiana streams*
    - Hydrologic characteristics: Page, L. V. 0585
  - Organic contaminants, "refractories"*: Spicher, R. G. 0870
  - Pacific Northwest*
    - Quality-control program: Towne, W. W. 1265
  - Public, finished*
    - Trace elements, significance: Taylor, F. B. 1027
  - Public, municipal*
    - Shortage study: Thompson, C. B. 0682
  - Public utilities liability*
    - Water rights litigation: Taylor, E. F. 1026
  - Quality monitoring*
    - Radioisotope uses: Feely, H. W. 0634
  - Quality, quantity engineering*
    - Textbook: Twort, A. C. 1064
- Water supply**
- Reference list*
    - U.S. Robert A. Taft Sanitary Eng. Center: R.A. Taft San. Eng. Center. 1101
  - Research*
    - Information retrieval: Faber, H. A. 0626
  - Reservoirs, quality improvement*
    - Induced circulation: Ford, M. E., Jr. 0757
  - Rivers*
    - Pollution, Europe and U.S.: Biemond, Cornelius. 0122
  - Rural systems*
    - Planning: Henderson, G. E. 1462
  - Shortage study*
    - Municipal and irrigation supplies: Thompson, C. B. 0682
  - Storage*
    - U.S. Senate hearing, Great Lakes-Hudson River waterway: U.S. Congress, Senate. 1085
  - Streambed percolation*
    - Development practices: Rorabaugh, M. I. 0736
  - Surface water development*
    - Associated problems: Vandertulip, J. J. 1289
  - Taste and odor control*
    - Missouri River: Erdei, J. F. 0223
  - United States, western*
    - Federal-State conflicts: Taylor, E. F. 1025
  - Urban watersheds*
    - Management: Wheeler, G. E., Jr. 1394
  - Water treatment*
    - ABS removal*
      - Biodegradation, aerobic and anaerobic: Wayman, C. H. 1165
    - Bacterial contamination*
      - Corrosion and plugging control: Amstutz, R. W. 0054
    - Bibliography*
      - Biological references: Ingram, W. M. 0312
    - Color, organic compounds*
      - Coagulation, ferric sulfate: Black, A. P. 0129
    - Detergent removal*
      - Sorption, heteronionic clay minerals: Wayman, C. H. 1302
    - Fluoridation*
      - AWWA policy statement: American Water Works Association. 0076
      - New systems, U.S. and Canada, 1961: American Water Works Association. 0077
    - Organic compounds, "refractories"*
      - Oxidation, potassium permanganate: Spicher, R. G. 0870
    - Pollution removal*
      - Detergents, commercial fertilizers: Meier, E. B. 0544
    - Reservoirs*
      - Manganese in solution: Ingols, R. S. 0311
    - Taste and odor removal*
      - River water: DuByne, E. T. 0189
    - Waste water*
      - Ecology: Hawkes, H. A. 0828
    - Water supply engineering*
      - Textbook: Twort, A. C. 1064

**Water use***Agricultural problems*

Need for education: Revelle, Roger. 0720

*California, Humboldt and Trinity Counties:*  
York, C. W. 1397*California, Los Angeles area:* Miller, D. T. 0665*California, San Diego County*

Johnson, E. C. 0339

*California, southern*

Desert areas, 1958: Johnson, E. C. 0340

*Conflicts*

Oregon, Portland: Brown, S. G. 0003

*Cooling*Costs for use of cooling towers: Berg, Brian.  
0115*Deserts*

Aridity and man: Leopold, L. B. 0486

*Domestic*

Economics: Dunn, D. F. 0192

*Economic evaluation*

California: Lofting, E. M. 0500

*Effects on temperature:* Sylvester, R. O. 1362*Ground water*

Economics: Koenig, Louis. 0385

*Ground-water storage*

Economics: Vaseen, V. A. 1115

*Industrial*

New Jersey: Grossman, Max. 0792

Petroleum refining: Ott, L. E., Jr. 0579

Styrene, butadiene, and synthetic rubber  
industries: Durfor, C. N. 0195

Texas gulf coast: Meier, Wilbur. 0545

*Industrial re-use:* Internat. Union Pure. 1398*International rivers and lakes*

Laws: Pan American Union. 1461

*Irrigation*Determining consumptive use and irrigation  
requirements: Blaney, H. F. 0131

Irrigated acreage, United States, 1962:

Irrigation Engineering and Maintenance.  
0316

Law design: Jones, D. S., Jr. 0345

Saline water: Kelley, W. P. 0361

Southern Alberta: Hobbs, E. H. 0946

Survey, state by state: Irrigation Engineering  
and Maintenance. 0315Unique consumptive use curve: Hansen, V. E.  
1408*Land and water management:* Thorne, Wynne.  
1052*Laws*

Federal-State conflicts: Taylor, E. F. 1025

*Michigan*Shiawassee River basin: Michigan Water  
Resources Commission. 1441*Mississippi, northeastern*

Cretaceous aquifers: Boswell, E. H. 0137

*Municipal water supplies*New Mexico, southeastern: Dinwiddie, G. A.  
0180*Need for efficiency:* DeHaven, J. C. 0171*New York City*Effects of large ground-water withdrawals:  
Perlmuter, N. M. 1472**Water use***Ohio*Scioto River basin: Ohio Division of Water.  
0572*Ohio River*

Industrial and municipal: Cleary, E. J. 0229

*Oil production*Water flooding, Cretaceous sands, Texas:  
Rayner, F. A. 0715*Oregon*Middle Willamette River basin: Oregon Water  
Resources Board. 1042Umatilla River basin: Oregon Water  
Resources Board. 1041*Phreatophytes*Pecos River basin: U.S. Congress, Senate.  
1083*Problems*Arizona, Tucson area: Wilson, Andrew W.  
1348*Quality criteria for major beneficial:* McKee, J.  
E. 0447*Recreation*Problems and policies: Clawson, Marion.  
0227*Rights, western U.S.*

Federal power: Morreale, Eva H. 0421

*Saline water*

Irrigation: Batchelder, A. R. 0100

Metal corrosion problems: Fink, F. W. 0751

*Saltcedar*Variation with climate and access to water:  
Van Hyckama, T. E. A. 1109*Temperature*

Effects and control: Everts, C. M. 1361

*Trends:* Bogue, S. H. 0136*United States*Resources planning research: Wolman, Abel.  
1205**Waterpower***Alaska*

High altitude lakes: Johnson, Arthur. 0333

*Arid regions:* Schufle, J. A. 0621*Site studies*

Oregon, Trask River basin: Young, L. L. 1227

**Water-resources development***California*Federal-State cooperation: Dominy, F. E.  
0184*History, United States*Lessons applicable to emerging countries:  
Wolman, Abel. 1148*River-basin planning:* U.S. Army. 1391**Watersheds***Agricultural*Planning engineering programs: Francis, C. J.  
0759*Calibration*

Hydrologic studies: Bethlahmy, Nedavia. 0120

*California*

Erosion control logging: Wallis, J. R. 1129

*Climatic parameters*

Solar beam irradiation: Lee, Richard. 0479

**Watersheds***Comparative geology*

Using baseflow recession analysis: Knisel, W. G., Jr. 1424

*Development projects, 1963*

U.S. Congressional hearings: U.S. Congress, House. 1049

*Drainage area*

Texas, Trinity River basin and Trinity-San Jacinto coastal area: U.S. Geological Survey. 1094

*Drainage area data*

Texas, San Antonio River basin: U.S. Geological Survey. 1093

*Estimating mean precipitation*

Accuracy: McGuinness, J. L. 0446

*Evaporation, estimation*

Niinivaara's method: Kaitera, Pentti. 0352

*Forest practices*

Effect on streamflow: Reinhart, K. G. 0930

*Forested*

Effects of fire on runoff: Krammes, J. S. 1372

*Hydrologic effects of grazing*

Lusby, G. C. 0508

*Land management*

Runoff control: Landgren, N. E. 0290

*Land use and hydrologic changes*

North Carolina, Parker Branch: Tennessee Valley Authority. 0952

*Landforms analysis*

Central Great Plains: Zakrzewska, Barbara. 1229

*Management*

Guides for land managers: Webster, H. H. 1142

Increased water yield program: Ogrosky, H. O. 0571

Maryland, Montgomery County: Wheeler, G. E., Jr. 1394

Ohio, Scioto River basin: Ohio Division of Water. 0572

Water supply: Cliff, E. P. 0230

*Management of water yield*

Effect of forest cutting: Trimble, G. R., Jr. 1058

*Management research*

Conversion from brush to grass: Hill, L. W. 0942

*Mathematical models*

Measures of linearity: Amoroch, J. 0055

*Peak runoff rate prediction*

Coefficient evaluation: Horn, D. L. 0693

*Prairie type*

Ground-water flow model: Meyboom, P. 1376

*Runoff data analysis*

Mathematical model: Tennessee Valley Authority. 1030

*Small*

Ground-water flow patterns: Toth, J. 1057

Ground-water flow, theory: Toth, J. 1333

Role in river basin planning: Brown, C. B. 0278

*Southeast U.S. River Basins*

Land and water resources development plan: U.S. Study Commission. 1102

**Watersheds***Southeastern U.S. river basins*

Land and water resources: Tomlinson, G. E. 1056

*Streamflow increases*

Vegetation removal: Rowe, P. B. 0839

*Surface-water contamination*

Pesticides and detergents, evaluation: Dugan, P. R. 0191

*Vegetation removal*

Streamflow increases: Rowe, P. B. 0839

*Vegetative cover and runoff*

North Carolina, western: Cooper, A. J. 0402

*Washington, Cedar River*

Seattle water supply: Thompson, A. E. 0988

*Water development*

Management by conservancy districts: Mendenhall, Howard. 0548

**Well construction***Bibliography*: Giefer, G. J. 0775*Caving problems*: Marine, I. W. 0523*Domestic*

Bacteriological pollution: Heukelekian, H. 0941

*Geophysics*

Use by small water-well contractor: Linck, C. J. 0495

*Gravel packing*

Hydraulic method, deep wells: Fawcett, A. E. 0633

*Jetting method*

Small diameter wells: Moulder, E. A. 0426

*Large diameter holes*: Lauman, R. H. 0302*Observation wells*

Small and large diameter: Benz, L. C. 0114

*Power auger*

Shallow holes: Bailey, N. G. 0086

*Reverse-circulation drilling*

Advantages: Burnham, W. L. 1480

*Sand dune areas*: Brown, S. G. 0002*Screen design for efficiency*: Smith, R. C. 0860*State ground-water agencies*

Value to small water well contractors: Walker, A. C. 1125

*Statutes and regulations*: Calabresa, T. A. 0020*Techniques used*

United Kingdom: Stow, G. R. S. 1011

*Unconsolidated material*

Planning and design: Mogg, J. L. 1439

**Well development***Hydraulic fracturing*

Effect of existing fractures: Lamont, Norman. 0288

Transient pressure behavior: Scott, J. O. 1384

*Techniques*

Methods for increasing yields: Wilderman, G. H. 1383

**Well logging***Drill cuttings*

Data collecting and interpretation: Stevens, P. R. 1002

*Electrical and radioactive*

Problems in interpretation: Patten, E. P., Jr. 0591

**Well logging***Formation density logs*

Water saturation determination: Alger, R. P. 0059

**Fundamentals**

Textbook: Wyllie, M. R. J. 1215

*Gamma-ray spectroscopy*

Water-quality determination: Caldwell, R. L. 0021

**Porosity**

Carbonates and evaporites: Savre, W. C. 0906

*Sonic, neutron and density surveys*

Accurate porosity determination: Savre, W. C. 0906

**United States**

Recent developments: Doll, H. G. 1297

**Wells**

*Bibliography:* Giefer, G. J. 0775

*Chemical injection*

Fe-Mg biological activity suppression: Pittendreigh, L. M. 0613

*Corrosion and plugging*

Bacterial contamination: Amstutz, R. W. 0054

**Deep**

Tapping geothermal brine: White, D. E. 1146

*Dewatering*

Use of well points: Noble, D. G. 0557

*Dolomite aquifers*

Specific-capacity data analysis: Walton, W. C. 1136

**Domestic**

Bacteriological behavior: Heukelekian, H. 0941

*Drawdown*

Model analysis: Lehr, J. H. 1428

*Drawdown determination*

Partially tapped aquifer: Jacob, C. E. 0324

*Drilling small diameter*

Jetting method: Moulder, E. A. 0426

*Emergency water supplies*

Georgia, Atlanta area: Stewart, J. W. 1009

*Ground-water levels*

Data analysis: Klein, Marian. 0378

*Horizontal*

Streambed percolation: Rorabaugh, M. I. 0736

*Individual home*

Public health aspects: Hancock, J. C. 0803

*Multiaquifer*

Measurement of head distribution: Brown, D. J. 0926

*Observation*

Small and large diameter: Benz, L. C. 0114

*Oil*

Two-phase radial flow: Martin, J. C. 0528

*Pressure measurements*

Linear fluid-barrier detection in aquifers:

Davis, E. G., Jr. 0164

*Recharging*

Ground-water hydraulics: Mobasher, Fereidoun. 0411

*Renewal*

Television inspection: Gorder, Z. A. 0786

*Sampling techniques*

Saline ground water: Kohout, F. A. 0386

**Wells***Shallow, in limestone terrane*

Yields: Csallany, Sandor. 0154

*Spacing*

Determination in thick, extensive aquifer: Theis, C. V. 1406

*Specific capacity*

Estimation: Turcan, A. N., Jr. 1062

Transmissibility estimation: Theis, C. V. 0980

*Transient pressure behavior*

Effect of vertical fractures: Scott, J. O. 1384

*Unconfined aquifer*

Application of Theis' formula: Youngs, E. G. 1228

*Waste disposal, deep*

Indiana, Newport: Hundley, C. L. 0699

*Water level changes, prediction*

Special drawdown scales: Conover, C. S. 0398

**West Virginia***Fernow Experimental Forest*

Logging and streamflow: Reinhart, K. G. 0930

*Kanawha River Valley, Quaternary alluvium*

Riverbed recharge: Wilmoth, B. M. 1197

*Tucker County*

Forest watershed management research: Reinhart, K. G. 0930

*Water quality network*

1963 data compilation: West Virginia Div.

Water Resources. 1184

*Water resources*

Bibliography: Tsai, J. Cha-Hong. 1059

Summary description: Doll, W. L. 0183

**Wisconsin***Black Earth Creek basin*

Water resources: Cline, D. R. 0231

*Erosion control*

Gully channel changes: Woolhiser, D. A. 1396

*Little Plover River project*

Movie—Sand-plains hydrology: Weeks, E. P. 1175

*Rock County*

Ground water: LeRoux, E. F. 0487

*Southern*

Sediment characteristics of small streams:

Collier, C. R. 0241

**Wyoming***Bear River valley*

Ground water: Robinove, C. J. 0931

*Bighorn County, Greybull River-Dry Creek area*

Ground water: Robinove, C. J. 0727

*Floods*

Magnitude and frequency: Carter, J. R. 0246

*Greybull River-Dry Creek area*

Ground water: Robinove, C. J. 0727

*Park County, Greybull River-Dry Creek area*

Ground water: Robinove, C. J. 0727

*Riverton project*

Disposed of irrigation drainage, channel erosion: Miller, C. R. 0663

*Teton County*

Fall Creek valley, erosion under grass and forest: Walker, E. H. 1126

*Uinta County, Lyman-Mountain View area*

Ground water: Robinove, C. J. 0729